

Subject Index to Volume 255

A

- A6 cells
epithelia, differentiation, dexamethasone and, C661
sodium transport, corticosterone's metabolites for, F736
- ACE: *see* Angiotensin-converting enzyme
- 4-Acetamido-4'-isothiocyanostilbene-2,2'-disulfonic acid
intracellular chloride activity and, proximal straight tubule, F49
intracellular pH and, skin (frog), F126
- Acetate, endothelium-independent increases in cAMP and, caudal artery, H1378
- Acetazolamide
citrate reabsorption and, proximal convoluted tubule, F301
potassium-depletion alkalosis, F763
- Acetylcarnitines, interaction, insulin-stimulated glucose metabolism, E946
- Acetylcholine
arterial smooth muscle, H207
bioassay of endothelium-derived relaxing factor, H1259
blockade, cerebral vasodilation, H847
calcium-antagonistic effects, atrial cells (guinea pig), H872
calcium transients induced by, aortic endothelial cells, H1549
depressed automaticity and conduction by, AV node, H7
endothelial cells stimulated by, hyperpolarization and increased free calcium in, H965
gradient in muscle cells, biliary tract, G647
³H-labeled, release, neurokinin effects, atrial muscle, G779
ischemia and reperfusion, cerebral artery response, H879
measurement, vascular pressure-volume relations, H690
muscarinic regulation, pulmonary volume, H1219
oxygen free radical effects, endothelium-dependent relaxation of diabetic aorta, H825
pressure-induced contraction and, carotid arteries, H783
relaxation enhanced by, flow-induced, H446
supersensitivity to, sinus and AV nodes, after parasympathetic denervation, H534
vascular reactivity and, saphenous vein, H860
- Acetyl CoA carboxylase, prolactin effects, mammary gland explants, E567
- Acetyl-CoA hydrolase, activity, cholesterol metabolism relations, R724
- N-Acetylneuraminic acid, insulin action and, diabetes mellitus, E173
- ACh: *see* Acetylcholine
- Acid
excretion
inner medullary collecting duct, F307, F1155
net, potassium-depletion alkalosis, F763
extrusion, bicarbonate and, glomerular mesangial cells, C844
secretion, catecholamine-stimulated, jejunum, G640
- Acid-base balance
chloride absorption and, intestine (flounder), G247
citrate and bicarbonate, complementary role, F182
hepatic renal interrelations, F807
mesangial cells, glomerular, C844, C857
osmolality and body temperature, during sodium chloride and water intake, R97
pH and lactic acid output, muscle, forearm, F479
sodium chloride dietary intake, regulation of carbon dioxide ventilation and, R105
urinary, α_1 -adrenoceptor mediation, F116
- Acidemia, sodium-hydrogen antiporter activity and, renal, F237
- Acidification
adaptation, inner medullary collecting duct, F1155
ANF and angiotensin, proximal effects, F434
suppression of, inner medullary collecting duct, F307
- Acidosis
acute extracellular, catecholamine release and (trout), R395
citrate reabsorption and, proximal convoluted tubule, F301
extracellular, ATP-depleted hepatocytes, C315
glucose tolerance induced by, adrenergic blockade effects, E812
inorganic phosphate content and, heart, H189
metabolic
alanine and, kidney, R42
renal adaptation, senescence and, F1183
sodium-hydrogen antiporter activity, F237
naloxone and circulatory changes, awake state, H1106
parathyroid hormone effects, renal proximal tubular segments, F847
respiratory
bicarbonate transport and, collecting tubules, F656
sodium-hydrogen antiporter activity, F237
- Acid phosphatase, bone changes, after weightlessness in short spaceflight, R243
- Acridine orange, fluorescence, jejunal brush borders, G206
- ACTH: *see* Adrenocorticotropin
- Actin, nonrandom turnover, cardiac fibroblasts, C202
- Acyl-coenzyme A oxidase, myocardial fatty, properties and subcellular localization, H441
- Addison's disease, potassium regulation, aldosterone role in, F811
- Adenine nucleotides, synthesis, skeletal muscle fiber types, C271
- Adenosine
calcium-antagonistic effects, atrial cells (guinea pig), H872
calcium influx and, coronary artery, H1492
coronary artery constriction, flow-mediated attenuation, H1317
coronary vasodilation induced by, dual control, H250
food-induced jejunal hyperemia and, G168
interstitial fluid, cerebral blood flow and, hemorrhagic hypotension, H1211
intracellular calcium and, cortical collecting tubule cells, C581
intrarenal, renal blood flow and, F1230
ischemia and reperfusion, cerebral artery response, H879
portal blood flow and, G417
release, heart, development effects (guinea pig), H1460
role in noradrenergic neurotransmission, H386
stimulation of proliferation, endothelial cells, H554
- Adenosine analogues, tubuloglomerular feedback responses and, F33
- Adenosine monophosphate, cyclic
abnormal regulation, pancreatic islets, obesity, E833
activation, prostaglandin E₂ response, colonic cell line, G27
ADH and, membrane, urinary bladder (toad), F375
adrenergic stimulation and, ANP release, E260
ANF vasodilatory action and, glomerular afferent arterioles, F415
AVP-dependent levels, PGE₂ and α -adrenergic agonist effects, renal tubules, F43
AVP-sensitive, calmodulin dependence, F834
calcitonin effects on oxytocin, bladder (toad), E613
calcium-activated potassium channel and, aortic smooth muscle cells, H754
dexamethasone effects, A6 epithelia, C661
1,25-dihydroxyvitamin D synthesis, hypoparathyroidism, E730
diuresis, α_2 -adrenoceptor agonist-induced, F317
DNA synthesis and pH depression, osteoblasts, E9
endothelium-independent increases, acetate and, caudal artery, H1378
epithelial cells, tracheal, C760
fluorescent angiotensin II probe, C452
functional G_i protein, changes in expression, heart cells, C51
hepatic, treadmill running and, R38
hormone effects on lipid composition, testes, E442
intracellular calcium transport and, bladder cells (toad), F1015
intracellular pH and, skin (frog), F126
myocardial respiratory control, H185
neuropeptide Y mobilizes calcium, erythroleukemia cells, E880
nicotinamide and phosphate transport, renal brush-border membrane, F15
phosphaturic effect of, β -receptors in resistance to, R557

- Adenosine monophosphate (*continued*)
 production
 glucagon and catecholamine effects, hepatocytes (sheep), R539
 synthetic tumoral PTH-related peptide effects, F957
 prostaglandin-stimulated contraction and, smooth muscle cells, colon, G807
 PTH effects, osteoblast-like cell line, E660
 regulation of chloride transport, fibroblasts, C552
 renal vasoconstriction, H885
 vasopressin stimulation of, cortical collecting tubules, F1107
 Adenosine monophosphate analogue, infusion effects, phosphate deprivation, F96
 Adenosine triphosphatase
 chloride pump and, controversy, R677
 hydrogen ion, renal cortical endosomes, F885
 Adenosine triphosphate
 cellular
 glutathione efflux and, hepatocytes, G403
 substrate specificity, nephron, F977
 concentration, calcium transport and, small intestine, G482
 depletion, normoxic heart, C192
 hepatocytes depleted in, acidosis effects on cell death, C315
 intracellular pH and, myocardial, H189
 phosphoinositide metabolism and, aorta, H1476
 potassium channels sensitive to, hypertrophied ventricular myocytes, H1254
 rate of utilization, carotid artery (pig), C393
 receptors: *see* Receptors
 Adenylate cyclase
 AVP-sensitive production, calmodulin dependence, F834
 carbachol and, functional G_i protein, heart cells, C51
 dexamethasone effects, A6 epithelia, C661
 glucocorticoid modulation of, brown fat, E153
 internal anal sphincter relaxation, G571
 neuropeptide Y mobilizes calcium, erythroleukemia cells, E880
 postnatal maturation, papillary muscle, H335
 protease effects, potassium-depleted kidney, F1033
 regulation, obesity, pancreatic islets, E833
 vasopressin-sensitive, lithium inhibition of, renal epithelial cells, F995
 ADH: *see* Antidiuretic hormone
 Adipocytes
 lactate production, from glucose, regional differences, E716
 microdialysis, lipolysis studies, E737
 3-O-methylglucose transport, growth hormone stimulation of, E723
 size and number, thyroid status effects, E280
 Adipose tissue
 brown: *see* Brown fat
 glucose intercellular levels, microdialysis, E218
 microdialysis, lipolysis studies, E737
 white
 development, thyroid status and, E280
 energy balance in adrenalectomized obese mice, R141
 lipoprotein lipase, high-fat diet and exercise effects, R226
 melatonin and, adult (hamster), R812
 ADP-ATP carrier, antibodies against, enhancement of calcium current, myocytes, H960
 Adrenal cortex
 circadian variation in response, CRF-41 and AVP, E265
 response to bacterial endotoxin, during growth, E525
 Adrenalectomy
 diet and, denervation atrophy, muscle, E850
 energy balance in, starch and glucose effects, obesity, R141
 food restriction and, somatic growth and diabetes, R787
 glucocorticoid-induced cation transport, spironolactone effects, colon, F1235
 glucose and, brown fat metabolism, E597
 mirex-induced adaptive liver growth, hepatocytes and, G132
 modulation of cyclase activity, glucocorticoids, E153
 sympathetic nerve activity, changes in coronary occlusion, H704
 Adrenal gland
 corticosterone, obesity effects, E229
 function, immune activation and, R839
 multiple renin forms, E531
 perfusion, capsaicin, catecholamine secretion and, E23
 steroidogenesis, vasopressin effects, R806
 structure changes, aging, E903
 Adrenal glomerulosa cells, calcium response of, external potassium, E488
 Adrenal medulla, norepinephrine turnover, genetic hypertension, H736
 Adrenal nerve
 excitation, capsaicin, E23
 unequal bulbospinal influences on, R946
 Adrenal sympathetic nerve activity, changes in, coronary occlusion, H704
 Adrenergic agents, circulatory response to, chloralose effects (lamb), H419
 α -Adrenergic agonists, prostaglandin E₂ and, AVP-dependent cAMP levels, renal tubules, F43
 Adrenergic-histaminergic interactions, neural, paw, H426
 Adrenergic mechanisms, insulin action opposed by, E33
 Adrenergic nervous system, myocardial, sympathetic activity in cardiac hypertrophy, H452
 Adrenergic stimulation
 inhibition of protein synthesis during, heart, E537
 stimulation of ANP release, E260
 β -Adrenergic stimulation, inotropic sensitivity, early sepsis, H699
 Adrenocortical cells
 changes during aging, E903
 responsiveness to ACTH, obesity and, E229
 Adrenocorticotropin
 adrenocortical cell responsiveness to, obesity and, E229
 blood, evaluation of sample, R851
 catecholaminergic system control, E463
 circadian variation in response, CRF-41 and AVP, E265
 corticosteroid inhibition of, R344
 corticosterone release, CRF infusion effects, E213
 corticosterone-releasing effects, R839
 plasma concentration, vasopressin infusion effects, awake state, R665
 secretion, maternal cortisol secretion effects, fetus (sheep), R412
 steroid inhibition of, E241
 vasopressin effects, adrenal steroidogenesis, R806
 vasopressin release and, CRF and angiotensin II effects, awake state, E46
 Adriamycin, nephrosis, renal ablation in, F1243
 Aerobic capacity, hemin effects, skeletal myotubes, C519
 Afferent fibers
 renal, intrarenal bradykinin effects, R994
 vagal, serotonergic mechanisms during hemorrhage, H496
 Afferents, vagal: *see* Vagal afferents
 Aggrehores, ADH-stimulated delivery, vesicular transport role in (toad, frog), C641
 Aging
 adrenal gland changes, E903
 body fluid volume changes, spontaneous hypertension, F953
 calcium binding and, cortical bone extracts, H101
 decreased colon secretion, nongoblet crypt cells, G72
 feeding and, glomerular filtration rate and proteinuria, awake state, F250
 tubular adaptation, phosphate reabsorption, F278
 β -Agonist, hypotensive effects, awake state, H592
 Airway
 tone, response to neurotensin in ventral medulla, R780
 upper, pulmonary and systemic blood flow contributions, lung, H1130
 Alanine
 production, physiological hypercortisolemia effects, E366
 renal metabolism and, R42
 Alanine aminopeptidase, transport, apical membranes, F1249
 Albumin
 crystal absorption, growth slowing and, F1197
 flux, volume flow and, skin and muscles, H458
 permeability, bacterial exotoxin effects, C368
 reabsorption kinetics, pleural space, H375
 water channels and, endothelium, H638
 Alcohol, portal blood flow increase and, G417
 Aldosterone
 adaptation to sodium delivery and, distal tubule and collecting duct adaptation to, F1256, F1269
 characteristics, papillary collecting duct cells, F1160
 cytosolic calcium and, glomerulosa cells, E338

- hypoxia, awake state (sheep), R274
intravenous endothelin effects, awake state, R1064
natriuresis, atrial stretch and, R259
plasma renin activity and, awake state, E793
potassium regulation and, F811
renin, angiotensinogen, and ANP mRNA levels, E129
secretion, ANH hormone effects, sodium depletion, R867
sodium repletion and, colonic ion transport, G329
vagat activity, hypotensive lower-body negative pressure effects, R149
vasopressin and
adrenal steroidogenesis, R806
central interactions on cardiovascular system, R166
- Algorithms, pulse-detection, computer simulation of hormone secretion, E775
- Alkaloids, veratrum, neural control of rectal gland (shark), R212
- Alkalosis
inorganic phosphate content and, heart, H189
metabolic
citrate and bicarbonate role in, F182
collecting duct chloride transport, F220
potassium-depletion, F763
- Allergy, food, motility and anaphylaxis, intestinal, G505
- Allometry, renal (lizard), R760
- Allopurinol, antioxidant properties of extracellular fluid and, H202
- Altitude, high, liver and heart mitochondria, C123
- Alveolar epithelium, permeability, cathepsin G effects, C603
- Amiloride
cation channel sensitive to, apical membrane, inner medullary collecting duct, F278
cell death in hepatocytes, extracellular acidosis effects, C315
characteristics, papillary collecting duct cells, F1160
decreased secretion, aging and, colon, G72
DNA synthesis and pH depression, osteoblasts, E9
intestinal response, G18
intracellular pH and, skin (frog), F930, F922
oxytocin effects, skin epithelium (frog), C357
paracellular pathway, cortical collecting duct, F720
postischemic recovery and, heart ventricles, H608
sensitivity to, sodium-hydrogen exchange and, LLC-PK₁ mutant, C495
sodium channel protein, antibodies against, renal papilla, C835
sodium-chloride absorption and, proximal tubule, F461
sodium-chloride taste response after, R1002
sodium-hydrogen exchange and, renal cells (opossum), C76
taste transduction, tongue, R117
transport, jejunal brush-border membrane vesicles, G206
transport site, urea, skin (toad), F429
- vascular reactivity and, saphenous vein, H360
- Amines, biogenic, pulmonary vascular reactivity to, acute hypoxia, H329
- Amino acids
branched-chain, metabolism, kidney mitochondria, E475
dietary regulation of transport, intestinal, G143
extraction effects, protein kinetics, R303
infusion, renal response, diabetic adults, F755
kinetics, time course of cortisol action, E366
metabolism, insulin responsiveness of, bedrest, E548
muscle, protein synthesis and, E166
plasma, renal hemodynamics and, F444
transport
growth-dependent regulation of system A in, C261
inactivation by PCMBs, hepatocytes and hepatoma cells, C340
juxtamedullary nephrons, F397
liver plasma membrane vesicles, G253
low-affinity, intestinal, C737
tumor necrosis factor and, E206
- γ -Aminobutyric acid
 3 H-labeled, regulation of release, urinary bladder (guinea pig), R888
inhibition of sympathoexcitatory neurons, midline medullary stimulation, R605
- Aminoglycosides, microsomal protein synthesis inhibition, F265
- p-Aminohippurate, coupled transport, basolateral membrane vesicles, renal, F597
- Aminophylline, jejunal hyperemia, food-induced, G168
- Amino terminus, biologically active, PTH peripheral metabolism, E886
- Ammonia
loss, proximal tubule, F861
permeation, apical membrane, MDCK cells, F135
- Ammoniogenesis
alanine effects, renal metabolism, R42
intraneuron, purine nucleotide cycle effects, F1122
parathyroid hormone effects, renal proximal tubular segments, F847
- Ammonium
absorption activity, thick ascending limb, F57, F78
excretion, renal, metabolic acidosis in senescence, F1183
Ammonium chloride, potassium-depletion alkalosis, F763
- Amniotic fluid, regulation of cholesterol metabolism, aorta, fetus, H160
- Amphotericin B
benzodiazepine effects and, oxygen consumption, thick ascending limb, C385
histidine effects on vasopressin action, bladder (toad), F685
- Amylase
secretion
caerulein effects, pancreatic acini, G33
trypsin inhibitor treatment effects, G236
- α -Amylase, glycosylated, clearance, terminal fucose residues in, G374
- Anaerobic metabolism, interleukin 1, tumor necrosis factor and, E760
- Anal sphincter
external, properties of, G772
internal
purinoceptors in (opossum), G389
relaxation, G571
- Anaphylaxis
intestinal, proximal colon, G201
intestinal motility and, G505
- Androgen, body size and (monkey), E857
- Anesthesia
response to low-dose ANP infusion, renal, R449
urethan, changes during thermoregulation and fever, R73
VIP effects and, vascular conductance, R968
- Anesthetics, local, recovery kinetics (frog), H1558
- ANF: see Atrial natriuretic factor
- Angiogenesis, stimulation of proliferation, endothelial cells, H554
- Angiotensin
ANF and, proximal effects, F434
antagonism, angiotensin-converting enzyme inhibition and, F944
arterial pressure and, awake state, R693
captopril and, renal function, diabetic adults, F755
ischemia and reperfusion, cerebral artery response, H879
peritubular infusion, tubuloglomerular feedback during, F383
potassium depletion and, renovascular hypertension, H1181
potassium regulation, aldosterone role in, F811
receptors: see Receptors
sodium appetite related to, thirst and (cow), R205
thirst mechanisms, R217
- Angiotensin-converting enzyme, inhibition, angiotensin antagonism and, F944
- Angiotensin II
angiotensinogen synthesis and, hepatocytes, E70
autoregulation of cardiac output, hypotension, awake state, H44
bradykinin action, proximal tubule, F486
cAMP and, functional G_i protein, heart cells, C51
CRF effects and, ACTH and vasopressin release, awake state, E46
cytosolic calcium elevation and, glomerulosa cells, E338
drinking and pressor responses to, paraventricular nucleus lesion effects, R882
enhanced activity, anterior pituitary cell aggregates, hypertension, R407
fluorescent probe, development, C452
hyperresponsiveness of arterial rings and, H272
kinins and, regulation of papillary blood flow, F690
levels, during drinking, R500
local control of blood flow, mesenteric, G267
modulation of intrarenal effects, ANP, F545
nephrosis, renal ablation in, F1243
pressor responsiveness, estrous cycle, R1041
receptors: see Receptors
relaxation induced by, aorta (fowl), R591
renal function mechanism, kidney function, F749

- Angiotensin II (*continued*)
 renal nerve interactions, during sodium deprivation, F823
 TRH and BAY K 8644 stimulation, prolactin release, C633
 vascular responses to, antiserum to angiotensin-binding protein, H1542
 vasopressin effects, adrenal steroidogenesis, R806
- Angiotensinogen
 granules, renal, Triton WR-1339 in, E353
 mRNA levels
 regulation of accumulation, hepatocytes, E70
 sodium balance effects, E129
- Anions
 exchange
 placental microvillous membrane, fluorescence measurement, C789
 transepithelial, collecting duct, F220
 hypotonic volume regulation and, proximal straight tubules, F853
 organic
 biliary secretion, G745
 transport, renal basolateral membrane vesicles, F597
 transport, sex differences, liver, G822
- Anisomycin, protein synthesis inhibition by, biological rhythms (hamster), R1055
- Anisotropy, fluorescence, epinephrine and platelet activation, H1276
- Anococcygeus muscle, heat production, during isometric contraction, C536
- Anorexia, α - and β -adrenergic, ontogeny, R908
- Anoxia
 brain
 evoked potential activity and (turtle), R478
 orthodromic field potentials (turtle), R485
 glucose 1,6-bisphosphate during, skeletal muscle, C140
 glycolysis in, organ-specific control of (turtle), R774
 ion composition, brain and CSF, diving (turtle), R338
- ANP: *see* Atrial natriuretic peptide; Atrial natriuretic polypeptide
- Antidiuresis
 subpicomolar changes in vasopressin and, awake state, R940
 vasotocin-induced, glomerular filtration changes (kelp gull), R936
- Antidiuretic hormone: *see also* Vasopressin
 action, indomethacin effects, bladder (toad), F74
 aggregate delivery stimulated by, vesicular transport role in (toad, frog), C641
 apical membrane responses to, cytochalasin B effects, bladder (toad), C526
 apical plasma membrane, urinary bladder (toad), F375
 binding and internalization, collecting duct cells, C622
 cAMP-binding protein and, medullary tubules, F292
 hypotonic cell volume regulation, medullary thick ascending limb, F962
 modulation, diluting power of thick limbs of Henle, F1145
 permeability and, skin epithelium (frog), C357
- phosphate metabolites and, renal, NMR studies of, F581
 plasma, glomerular filtration changes (kelp gull), R936
 vasoconstrictor effect of, blockade after hemorrhage, awake state, H1325
- Antimycin A, glutathione efflux and, hepatocytes, G403
- Antropyloroduodenal activity, gastric emptying of liquid meals, G93
- Aorta
 cholesterol metabolism in, fetus, H160
 coarctation, renal cytochrome P-450-related arachidonate metabolism in, F151
 constriction, cardiac hypertrophy in, sympathetic activity during, H452
 diabetic, endothelium-dependent relaxation, oxygen free radical effects, H825
 phosphoinositide metabolism, H1476
 potassium channel, calcium-activated, H410
 regurgitation, left ventricular wall volume and, H1399
 relaxation, angiotensin II-induced (fowl), R591
- Aortic nerves, afferent vagal C-fibers, ANF effects, R6
- Arachidonate, renal cytochrome P-450 related metabolism, aortic coarctation, F151
- Arachidonic acid
 cascade, kinins and vascular injury, H397
 histamine stimulation of, endothelial cells, C214
 LH response to, gonadal steroid effects on, E314
 metabolism, aorta (fowl), R591
 orally fed, absorption and metabolism, G612
- Arachidonic acid metabolites, ethanol vasoaction and, gastric submucosa, G731
- Arcuate nucleus, hypothalamic lesions, LH pulses and, E583
- Area postrema, stimulation, cardiovascular changes and, R855
- AR4-2J cells, somatostatin receptors on, G113
- Arousal state, neuronal activity, REM and NREM sleep and hibernation (squirrel), R1008
- Arrhythmias
 calcium-dependent action potentials, reperfusion and, H992
 reentrant and focal, low potassium and, heart atrium, H1359
 ventricular, induction, shock strength and timing effects, H891
- Arterialization, oxygen consumption, forearm, measurement, E572
- Arterial rings, hyperresponsiveness, renal prehypertensive plasma effects, H272
- Arterioles
 cerebral, stroke and, H623
 cheek pouch, oxygen responses, lipoxigenase inhibitor effects (hamster), H711
 glomerular afferent, vasodilatory action of ANF, F415
 microvascular perfusion, cardiac hypertrophy, renal hypertension, H1384
- Arteriovenous fistula, flow-induced enhanced relaxation, acetylcholine, H446
- L-Aspartate, transport, intestinal, C737
- Atherosclerosis
 high-density lipoproteins, regulation of plasma lipid transfer, E894
 ischemic, thromboxane antagonism effects, H318
- ATPase: *see* Adenosine triphosphatase; Calcium-ATPase; Sodium-potassium-ATPase; Sodium-phosphate-ATPase
- ATP: *see* Adenosine triphosphate
- Atria: *see* Heart atria
- Atrial natriuretic factor
 angiotensin and, proximal effects, F434
 calcium mobilization induced by vasopressin and, glomerular mesangial cells, F771
 cGMP response to, spontaneous hypertension, vascular smooth muscle cells, C573
 dopamine receptors and, renal effects, F494
 dose response and pharmacokinetics, renal, R929
 E. coli enterotoxin, kidney receptors for (opossum), F1040
 gene expression and plasma levels of, sodium intake effects, H245
 glucose-stimulated insulin secretion and, E579
 hypothyroidism, during volume expansion, R61
 intravenous endothelin effects, awake state, R1064
 metabolism, renal, F466
 microinjection of, dorsal medulla, cardiovascular responses, R182
 perinatal expression, cardiac tissue, E388
 receptors: *see* Receptors
 reflex activation and, sympathetic nervous system, H685
- release
 atrial distension and, isolated heart, R232
 hypophysectomy, R534
 renal activity, cGMP as biological marker of, F1220
 renal responses and, blood volume expansion, F936
 response, vascular volume expansion, urine flow and (sheep), R846
 salt adaptation and (fish), F1281
 secretion
 hypoxemia stimulation of, H295
 ouabain effects, atrial cardiocytes, E383
 sodium chloride permeability and, inner medullary collecting duct, F421
 sympathetic inhibition by, vagal C-fiber blockade effects, R6
 vasodepression induced by, central nervous system, H616
 vasodilatory action, glomerular afferent arterioles, F415
- Atrial natriuretic hormone, renal function, aldosterone secretion and, R867
- Atrial natriuretic peptide
 adrenergic stimulation of release, E260
 calcium and protein kinase C role in, cardiocytes, H405
 intrarenal effects of, angiotensin II modulation of, F545

- low concentration, pressure-dependent natriuresis and, kidney, F391
- low-dose infusion, renal response in anesthesia, R449
- metabolic clearance of, kidney and, E934
- norepinephrine-stimulated secretion, inhibition by methacholine, H1429
- physiological dose of, renal function and, F907
- receptors: see Receptors
- regional hemodynamic effects, R737
- release, renal function and, vasopressin effects, E449
- renin and vasopressin, postural release, R368
- response to saline loading, essential hypertension, F1085
- saline loading and, awake state, H144
- solute excretion mediated by, renal ablation, F1091
- spontaneous hypertension, vascular smooth muscle cells, C169
- tubular sites of action, F313
- volume expansion and, additive and synergistic interaction, F66
- Atrial natriuretic polypeptide, release, hypercalcemia and ouabain effects, E437
- Atriopeptin
- cGMP and, renin release, F474
- intravenous endothelin effects, awake state, R1064
- plasma, decline during atrial distension, R259
- sympathetic inhibition by, vagal C-fiber blockade effects, R6
- Atriopeptin III, blood volume expansion, renal responses, F936
- Atrioventricular node
- acetylcholine effects, H7
- conduction, differential sympathetic regulation, H1050
- conduction pathway through, computer algorithm for modeling transmission, H1247
- propagation, hysteresis in, H985
- supersensitivity to ACh, after parasympathetic denervation, H534
- vagal preganglionic somata control of, localization, R703
- Atropine
- bioassay of endothelium-derived relaxing factor, H1259
- chronotropic effects, heart rate, H311
- esophageal response to distension (opossum), G587
- lower esophageal sphincter relaxation, on-line computer analysis, G794
- vagal activity, hypotensive lower-body negative pressure effects, R149
- Automaticity, depolarization-induced, ischemic conditions and reperfusion effects, H992
- Autonomic control, regulation of nerve activity, exercise training effects, H974
- Autonomic nerves, extrinsic, sphincter of Oddi (opossum), G619
- Autonomic nervous system
- activation, CRF, R744
- cardiac output, during hypotension, awake state, H44
- pulmonary vasodilation, combined neurohumoral block and, awake state, H1084
- pulmonary vasoregulation, pentobarbital anesthesia effects, H569
- regulation of gastric function, gastrin-releasing peptide, G298
- sympathetic activity, hypothalamic lesions, R507
- time-dependent involvement, hyperglycemia, 2-deoxy-D-glucose and, E928
- Autoradiography, thick ascending limb of Henle, innervation, F340
- Autoregulation
- cerebral
- adenosine and, H1211
- jugular venous pressure effects, H1516
- elevated ambient oxygen, mesentery, H131
- myogenic activity, coronary arterioles (pig), H1554
- plasma dopamine, renal blood flow, R379
- whole body, awake state, H44
- AV node: see Atrioventricular node
- AVP: see Vasopressin
- Awake state
- ACTH and vasopressin release, CRF and angiotensin II effects, E46
- adrenoceptor antagonism, regional hemodynamic responses, H813
- β -agonist hypotensive effects, long-term, H592
- angiotensin antagonism, ACE inhibition and, F944
- angiotensin II and renal nerve activities, during sodium deprivation, F823
- arterial pressure,
- neurogenic and humoral factors, R693
- support by major pressor systems, H483
- asynchrony, regional ventricular denervation and, H358
- blood flow
- during exercise, muscle, H1509
- postprandial celiac and superior mesenteric, G522
- cardiac function, early hypertension, H1525
- cardiac output measurement, Doppler flow probes, H1206
- coronary occlusion, selective cardiac denervation effects, H525
- dehydration, vasopressinergic antagonism during, awake state, R46
- feeding and aging effects, glomerular filtration rate and proteinuria, F250
- metabolic clearance of ANP, kidney, E934
- naloxone and circulatory changes, endotoxin shock, H1106
- plasma ACTH concentration, intravenous vasopressin effects, R665
- pulmonary vascular response, PAF (sheep), H434
- pulsatile sinus pressure changes, baroreflex responses and, H673
- saline loading, atrial resection and, H144
- sodium chloride intake, hydrogen homeostasis and body temperature during, R97
- vasoconstrictor effects of vasopressin, blockade after hemorrhage, H1325
- vasopressin change effects, urinary concentration, R940
- volume expansion, renal response to (monkey), R388
- Axon, protein transport, motoneurons, exercise training and, C731
- Bacteremia, protein clearance during, after surgery (sheep), H1421
- Balloon, intraventricular, volume measurement, H394
- Barium
- block, whole-cell potassium currents, early distal tubule cells (frog), F699
- decreased secretion, aging and, colon, G72
- paracellular pathway, cortical collecting duct, F720
- sodium-chloride transport and, urinary bladder (flounder), F229
- Barium chloride, absorption, pH effects, intestine (flounder), G247
- Basal metabolism, heart, potassium-chloride arrested, H807
- Basolateral membrane: see Membrane
- BAY K 8644
- hormone release and, pituitary tumor cells, E137
- stimulation, prolactin release, C633
- Behavior
- CCK-opiate interactions and, neonate, R901
- feeding
- CCK-8 effects after pylorotomy or pyloroplasty, R113
- CCK-8-induced changes, R21
- low-dose fourth ventricular bombesin effects, R988
- ingestive, postgastric controls, preweanlings, R191
- MSH and interleukin interactions and, R914
- Benzodiazepines, transport-related oxygen consumption and, thick ascending limb, C385
- Betaine, accumulation, during dehydration, renal inner medulla, F626
- Bethanechol
- lower esophageal sphincter relaxation, on-line computer analysis, G794
- smooth muscle cell contraction, colonic, G807
- Bicarbonate
- absorption, proximal, F434
- chloride absorption and, intestine (flounder), G247
- DIDS excretion and, biliary, G713
- drinking, inner medullary collecting duct, F307
- excretion
- hypoxia and, awake state (sheep), R274
- role in acid-base balance, F182
- urinary, α_1 -adrenoceptor mediation of, F1116
- hypotonic volume regulation and, proximal straight tubules, F853
- intracellular pH and, skin (frog), F126
- pH effects, proximal convoluted tubule, F301
- reabsorption
- renal, carbon dioxide partial pressure, F349
- sodium-hydrogen antiporter activity, F237
- secretion
- collecting duct, fluorescent characterization of, F1003
- duodenal, basal and prostaglandin E_2 -stimulated, G470

- Bicarbonate (*continued*)
 duodenal, splanchnic nerve stimulation inhibition, G709
 gastric, reflex sympathetic activation and, G752
 transport, respiratory acidosis effects, collecting tubules, F656
- Bile
 cyclic motor activity, G409
 flow, triacylglycerol secretion and, liver, E306
 formation, liver plasma membrane vesicles, G253
 Bile acid, hydroxylation, biliary protoporphyrin excretion and, liver, G382
 Bile duct, common, muscle cells, functional gradients from, G647
 Bile salt, cotransport, hepatocyte microtubules, G121
 Biliary excretion, taurocholate and bilirubin glucuronides, hepatocyte microtubules, G121
 Biliary tract
 cyclic motor activity, G409
 muscle cells, functional gradients from, G647
 Bilirebin, biliary secretion, lipid particles and, G745
 Bilirubin glucuronides, taurocholate and, hepatocyte cotransport, G121
 2,7-Bis(carboxyethyl)-5(6)-carboxyfluorescein, cell pH and sodium-hydrogen exchange, lens epithelium (toad), C595
 Bladder: *see* Gallbladder; Urinary bladder
 Bladder cells, intracellular calcium and sodium transport, vasopressin effects (toad), F1015
 Blastocyst, transport functions, developing epithelium, embryo, C419
 Blockade
 acetylcholine and nitric oxide, cerebral vasodilation, H847
 adrenergic
 acidosis-induced glucose intolerance and, E812
 glucose metabolism, endotoxin-induced increases in, E629
 β -adrenergic
 cardiovascular and sympathoadrenal responses and, mental stress, H1443
 circulation during carbon monoxide hypoxia, H77
 adrenoceptor, during exercise, R547
 atrioventricular, carotid sinus denervation, H910
 cholinergic, capsaicin excitation of adrenal nerve and, E23
 circulatory response to, chloralose effects (lamb), H419
 ganglionic, arterial pressure and, awake state, R693
 muscarinic, colonic transit, G529
 neurohumoral, pulmonary vasodilation and, awake state, H1084
 resistance to, saralasin, ACE inhibitors in sodium restriction, F944
 spinal pathways, pre- and postganglionic discharge and, R946
 vagal C-fiber, atrial natriuretic factor and, R6
 vasoconstrictor effects of vasopressin, after hemorrhage, awake state, H1325
 Blood
 buffering, carbon dioxide partial pressure, renal cortex, F349
 gas: *see* Gas
 oxygen content, estimation, H1545
 sample, transfusion protocol, R851
 transition from, changes in coronary pressure-flow relations, H476
 vasopressin and Met-Enk release in, hemorrhage effects, R731
 volume: *see* Volume
 Blood-brain barrier
 indomethacin effects, interleukin 1- α -induced fever and, R527
 peripheral glucose and insulin penetration, cerebrospinal fluid, R200
 sodium appetite, angiotensin-related, thirst and (cow), R205
 Blood flow: Circulation; Microcirculation
 autoregulation, pump perfusion effects via prostaglandin, H280
 β -blockade and, during carbon monoxide hypoxia, H77
 bone, parathyroid hormone effects, H94
 brain, hyperthermia effects, neonate (pig), H343
 bronchi, pulmonary and systemic circulation effects, H1130
 capillary pressure and, control during perfusion pressure, wing (bat), H1114
 cerebral
 interstitial fluid adenosine and, hemorrhagic hypotension, H1211
 jugular venous pressure effects, H1516
 middle artery occlusion, H623
 naloxone and, endotoxin shock, awake state, H1106
 neurohypophysis and hypothalamus, during hypercapnia, R295
 sympathetic regulation during seizures, newborn (lamb), H563
 chronic increase, endothelium-derived factor and, H446
 coronary
 dual control by α_2 -adrenoceptor activity, H250
 VIP receptors, desensitization, H601
 forearm, glucose metabolism and sodium-potassium exchange, insulin effects, E953
 gastric
 CNS regulation of, G298
 diabetes mellitus, glucagon role in, G542
 gastric mucosa, ulceration and injury, G395
 hepatic artery, continuous monitoring, G194
 intestinal, during sympathetic stimulation, H1091
 intrarenal, distribution, H1535
 jejunal, food-induced hyperemia, adenosine, G168
 large artery response, norepinephrine in hypertension, H36
 mesenteric, local control by renin-angiotensin system, G267
 metabolic changes, track sprint running (greyhound), R513
 muscle
 exercise and, awake state, H1509
 functional hyperemia (hamster), H236
 oxygen consumption, tension, and carbon dioxide tension relations, H1004
 vascularized skeletal grafts, H1043
 myocardial
 ischemia and afferent autonomic reflexes, H26
 selective cardiac denervation and, awake state, H525
 organ, during endotoxin shock, naloxone and ibuprofen effects (pig), H177
 papillary, kinins and angiotensin II influence, F690
 portal
 ethanol-induced, G417
 impaired thyroid hormone transport, obesity and, E54
 pulmonary
 lymph flow during, H1149
 perfusion effects (lamb), H1336
 upper airways and, lung, H1130
 reduced, exercise, substrate exchange in muscle and, H1156
 renal
 ACE inhibitors, sodium-restriction and, awake state, F944
 ANF and dopamine receptors, F494
 DOCA-salt hypertension, R563
 physiological dose of ANP and, F907
 plasma dopamine in regulation of, R379
 ureteral obstruction, renin-angiotensin system and, neonate (guinea pig), F1070
 renal medulla, intrarenal adenosine effects, F1230
 salt gland, blood flow and secretion (duck), R575
 skin, oscillating heat flow, R464
 spinal cord, ^{14}C -butanol measurement of, H953
 superior mesenteric, postprandial celiac and, awake state, G522
 Blood-nerve barrier, solute transfer across, compartmental analysis, R317
 Blood pressure: *see also* Pressure
 aldosterone-vasopressin interactions, central, R166
 ANF dose response and pharmacokinetics, kidney, R929
 arginine vasopressin and, during dehydration, awake state, R46
 arterial
 β -agonists effects, awake state, H592
 support by major pressor systems, awake state, H483
 awake state, CRF and angiotensin II effects, E46
 blood sample-transfusion protocol evaluation, R851
 hypertension, opioids and, E839
 mean arterial, area postrema stimulation and, R855
 NE-ACTH hypertension, control of sodium excretion in, R894
 physiological changes, during urethane anesthesia, R73
 reflex summation, H1244
 vasodepression, ANF-induced, H616
 vasopressin blockade, after hemorrhage, awake state, H1325
 venous volume and tone changes, forearm, H947
 Blood vessels
 sodium-calcium exchange, mesenteric artery, C323
 venomotor responses, central and local hypoxia, H760
 Body
 composition
 adrenalectomy effects on brown fat metabolism, E597
 androgenic influences (monkey), F557
 cimaterol effects, R952

- fluid: *see* Fluid
 lean, growth, food restriction and adrenalectomy in, R787
 weight: *see* Weight
- Bombesin**
 gastrin and somatostatin release, stomach, G627
 intestinal motility, pancreatic secretion and, G498
 satiety action of, pylorotomy effects, R1059
 secretion, gastrinoma cells, G596
- Bone**
 blood flow: *see* Blood flow
 cortical extracts, aging effects, H101
 density, sex steroid effects, during growth, E416
 formation, skeletal unloading, glucocorticoids and, E875
 histomorphometry, changes after weightlessness, R243
 mineral content, verapamil effects, E702
- Bowel, transit time, radiographic analysis, G633**
- Brachial artery, diameter, norepinephrine in hypertension and, H36**
- Bradycardia, during hypotension, R149**
- Bradykinin**
 abnormal vascular reactivity induced by, H397
 afferent autonomic reflexes and, myocardial ischemia, H26
 calcium influx stimulated by, aortic endothelial cells, H219
 cytosolic free calcium and, proximal tubule cells, F486
 intrarenal, spinoreticular cell response to, R994
 renal hemodynamics and, F408
- Brain**
 anoxia
 evoked potential activity and (turtle), R478
 orthodromic field potentials (turtle), R485
 blood flow: *see* Blood flow, cerebral capillaries, stroke and, H623
 deep hypoglycemia, glucose receptors in carotid perfused tissue, E680
 dialysis, hemorrhagic hypotension, H1211
 endogenous sugar acid depolarization, VMH neurons, R134
 injury, kinins and, H397
 ion composition, long-term anoxia effects, diving (turtle), R338
 ischemia and reperfusion, cerebral artery response, H879
 metabolic rate, hyperthermia effects, neonate (pig), H343
 nuclei
 DOCA-salt hypertension, angiotensin II receptors in, H646
 norepinephrine turnover, genetic hypertension, H729
 postischemic generation of superoxide anion, newborn, H401
 PTH-like reactivity (tetrapod vertebrates), R635, R643
 response to ventilation and oxygenation, fetus in utero (sheep), R1049
 sympathetic regulation, during seizures, newborn (lamb), H563
 temperature, MSH and interleukin interactions and, R914
 tissue, elastic behavior, R799
- Brain cells, ketone body transport, C133**
- Brain stem**
 auditory-evoked response, jugular venous pressure effects, H1516
 somata, controlling cardiac nodes, R703
- BRL 26830A, insulin receptors and, obesity, E101**
- Bronchi, blood flow: *see* Blood flow**
- Bronchiolar epithelium, development, postnatal undernutrition effects, R521**
- Brown fat**
 β -adrenoceptor subtypes and adenylate cyclase, glucocorticoid modulation of, E153
 composition, fasting-refeeding, repeated cycle effects, E120
 endotoxin-induced fever and, E617
 energy metabolism, cimaterol effects, R952
 GDP binding sites, E865
 insulin receptors, thermogenic agent effects, obesity, E101
 lipoprotein lipase, high-fat diet and exercise effects, R226
 melatonin effects, adults (hamster), R812
 metabolism, adrenalectomy effects, glucose and, E597
 nuclear T_2 receptor saturation, cold exposure and, E496
 thermogenesis
 CRF effects, E255
 lateral hypothalamic lesions, E708
 trophic changes, neural influences, during cold acclimation, R874
- Brush-border enzymes, growth and, small intestine, G813**
- Brush-border membrane**
 adaptation to phosphate deprivation, pituitary involvement in, R373
 D-glucose transport, sodium-dependent, small intestine, G292
 intestinal, protein digestion, neutral endopeptidase effects, G212
- renal**
 enzymatic and transport characteristics (snake), R52
 metabolic acidosis in senescence, F1183
- Brush-border membrane vesicles**
 foscarnet, phosphaturic action, F984
- intestinal**
 guanidine transport, G85
 sodium-dependent L-proline transport (eel), R648
 jejunal, sodium and hydrogen transport, G206
- renal**
 acidemia and sodium-hydrogen antiporter, F237
 carrier-mediated transport of pyroglutamate-histidine, C822
 phosphate transport, nicotinamide effects, F15
- Buccal mucosa, active electrolyte transport, G286**
- Bumetanide**
 endolymph production and, semicircular canal (shark), F711
 membrane potential, parotid acini, C508
 sodium influx sensitive to, medullary vesicles, F1138
 sodium-potassium chloride cotransport, intestine (flounder), C246
- 2,3-Butanedione monoxime, stunned myocardium, H60**
- Butanol, ^{14}C -labeled, distribution, spinal cord blood flow, H953**
- 2-Buten-4-olide, endogenous, ventromedial hypothalamic neurons and, R134**
- Buthionine sulfoximine**
 altered content, renal ischemic injury and, F911
 oxygen stress, renal proximal tubules, F874
- t-Butyl hydroperoxide, toxicity induced by, renal proximal tubules, C28**

C

- Cachectin, tumor necrosis factor, metabolic effects, E206**
- Caerulein, amylase secretion and, pancreatic acini, G33**
- Calcitonin, oxytocin hydromotric effect and, bladder (toad), E613**
- Calcitonin gene-related peptide, chronotropic effects, heart rate, H311**
- Calcium**
 absorption, duodenal, verapamil effects, E702
 ACh-induced transients, aortic endothelial cells, H1549
 activation, potassium currents, pancreatic acinar cells (guinea pig), G275
 active transport, renal, calcium-binding protein role in, F558
 ANP-mediated excretion, renal ablation, F1091
 ANP secretion and, cardiocytes, H405
 binding capacity, cortical bone extracts, age-related changes, H101
 brain and CSF composition, long-term anoxia effects, diving (turtle), R338
 cellular compartmentation, ischemic myocardium, H929
 cross-bridge cycling, smooth muscle, model, C86
 cross-bridge phosphorylation and, smooth muscle (pig), C401
 cytosolic, angiotensin II effects, glomerular cells, E338
 cytosolic free
 bradykinin effects, proximal tubule cells, F486
 regulation in proximal tubules, F787
 respiratory rate relations, myocytes, H347
 determination with aequorin, cytoplasmic magnesium in platelets, H855
 dynamics, myocyte deenergization and, C162
 endotoxemia effects, coronary flow, H1295
 flux, furosemide effects on insulin release, β -cells, E591
 gastrin and somatostatin release, stomach, G627
 homeostasis, PAF effects, PC-12 cell line, C559
 hyperpolarization and, acetylcholine-stimulated endothelial cells, H965
 influx
 adenosine effects, coronary artery, H1492
 bradykinin-stimulated, aortic endothelial cells, H219
 cation channel, activation by IGF II, BALB/c 3T3 cells, C442
 intracellular
 mesangial cell growth and, F898

Calcium (*continued*)

- transport, vasopressin effects, bladder cells (toad), F1015
- intramitochondrial free, liver, C304
- length dependence, smooth muscle contraction (swine), C473
- luteinizing hormone release and, pituitary (calf), E469
- metabolism
 - biologically active amino terminus, E886
 - renal, humor hypercalcemia of malignancy and, F1078
- mobilization
 - mesangial cell contractions by AVP and, F142
 - neuropeptide Y and, erythroleukemia cells, E880
 - vasopressin-induced, glomerular mesangial cells, F771
- myosin phosphorylation, smooth muscle contraction and, C719
- regulatory mechanisms, smooth muscle (guinea pig), C465
- respiratory acidosis and, bicarbonate transport, collecting tubules, F656
- single adrenal glomerulosa cell response, external potassium, E488
- skeletal exchangeable, parathyroid hormone effects, H94
- subcellular electrolyte shifts, myocardial ischemia and reperfusion, H917
- synthesis and secretion, parathyroid hormone and secretory protein I, E299
- transport
 - basolateral membrane vesicles, small intestine, G482
 - transcellular, glucose enhancement of, intestine, G339
- uptake
 - hydrogen-dependent, parotid gland, G429
 - leukotriene C₄ effects, taenia coli (guinea pig), C433
 - membrane vesicles, fura-2 monitoring of, C694
 - vascular α -adrenergic processes, streptozotocin diabetes, H1036
- Calcium-ATPase, uptake, membrane vesicles, fura-2 monitoring of, C694
- Calcium-binding protein: *see* Protein
- Calcium channels
 - cardiac, lipid bilayers, guanine nucleotide-binding proteins, H722
 - hormone release and, pituitary tumor cells, E137
 - voltage-dependent, renin release by neuronal norepinephrine, F614
- Calcium chloride, ANP release and, E437
- Calcium currents
 - antagonistic effects of adenosine, atrial cells (guinea pig), H872
 - antibody enhancement, myocytes, H960
 - hypertrophied ventricular myocytes, H1434
 - phenylephrine effects, ventricular myocytes, H1173
- Calcium ion channels
 - renal vasoconstriction, adenosine receptor-induced, H885
 - voltage-sensitive, leukotriene C₄ effects, taenia coli (guinea pig), C433
- Calcium ion currents, hormone release and, pituitary tumor cells, E137
- Calcium ionophore, ANP secretion and, cardiocytes, H405
- Calcium ions
 - cytoplasmic, diazoxide effects on insulin release, E422
 - dependence, carotid artery (pig), C393
 - intracellular activity
 - cardiac Purkinje fibers, C278
 - regulation of chloride transport, fibroblasts, C552
 - oxytocin and, bladder (toad), E613
- Calcium oxalate, adherence, papillary epithelial cells, F1025
- Calcium pool, agonist-sensitive, pancreatic acinar cells, G221, G229
- Calmodulin
 - calcium pump regulated by, transport capacity (toad, pig), C226
 - cAMP production dependent on, limb of Henle and medullary collecting tubules, F834
 - gastrin and somatostatin release, stomach, G627
 - increased SR N-methylation, skeletal muscle, E347
 - respiratory acidosis and, bicarbonate transport, collecting tubules, F656
 - transport, basolateral membrane vesicles, small intestine, G482
- Calmodulin antagonist, LH release, GnRH and secretagogue-induced (calf), E59
- Calorimetry
 - indirect
 - regulation of energy stores, E332
 - thyroid hormones and, E146
- cAMP: *see* Adenosine monophosphate, cyclic
- Capillaries
 - filtration coefficient, lipid absorption, intestinal, G690
 - microvascular perfusion, cardiac hypertrophy, renal hypertension, H1384
 - recruitment, control during perfusion pressure, wing (bat), H1114
- Capsaicin
 - catecholamine secretion excitation, adrenal sympathetic efferent nerve, E23
 - treatment, intestinal satiety and, R569
- Captopril
 - angiotensin-related sodium appetite and (cow), R205
 - mean arterial blood pressure and, awake state, H483
 - regional hemodynamic effects, R737
 - renal response to amino acid infusion and, diabetic adults, F755
 - renin, angiotensinogen, and ANP mRNA levels, E129
 - thirst mechanisms, R217
- Carbachol
 - agonist-sensitive calcium pool, pancreatic acinar cells, G221, G229
 - cAMP and, functional G_i protein, heart cells, C51
 - membrane potential, parotid acini, C508
- Carbamoylcholine, inositol lipid turnover and, gastric parietal cells, G99
- Carbidopa, inhibition, sodium-potassium-ATPase activity, cortical tubule cells, F666
- Carbohydrates
 - appetite, flavor preference conditioning, R672
 - dietary, sympathetic nervous system responses, skeletal muscle, E180
 - feeding, very-low-density lipoprotein triglyceride kinetics and, E236

- short-term energy balance relations, E332
- Carbon dioxide
 - bicarbonate transport and, collecting tubules, F656
 - chloride absorption and, intestine (flounder), G247
 - partial pressure, variations, renal cortex, F349, F361
 - pressure, blood sample-transfusion protocol evaluation, R851
- tension
 - blood flow relations, muscle, H1004
 - estimation of oxygen content in blood and, H1545
- ventilation, osmolality and sodium chloride dietary intake, R105
- ventilatory response to, sympathectomy and deafferentation, R252
- Carbonic anhydrase, collecting duct cells, fluorescent characterization of, F1003
- Carbon monoxide
 - cardiac muscle cells and, C291
 - hypoxia, circulation during β -adrenergic blockade, H77
- Cardiac ganglion, activity, H789
- Cardiac output
 - β -agonist effects, awake state, H592
 - arginine vasopressin and, during dehydration, awake state, R46
 - autoregulation, during hypotension, awake state, H44
 - carbon dioxide hypoxia, during β -adrenergic blockade, H77
 - low, hypoxanthine and lactate concentrations (lamb), H53
 - measurement with Doppler flow probes, awake state, H1206
 - α -stimulation and blockade, after chloralose (lamb), H419
 - vasopressin blockade, after hemorrhage, awake state, H1325
- Cardiocytes, atrial, proatrial natriuretic factor secretion, ouabain effects, E383
- Cardiomyocytes: *see also* Heart cells; Myocytes; Ventricular cells
 - ANP secretion, role of calcium and protein kinase C in, H405
 - contractile force, ventricle muscle strip comparison (frog), H111
 - fast inward current, embryonic heart (chick), H540
- Cardiovascular response
 - intravenous endothelin, awake state, R1064
 - mental stress, H1443
 - stress, borderline hypertension, R431
- Carnitine, interaction, insulin-stimulated glucose metabolism, E946
- Carnosine, dietary regulation of transport, intestinal, G143
- Carotid artery
 - cross-bridge phosphorylation, strontium effects (pig), C401
 - occlusion, constriction of lymphatics, H514
 - pressure-induced contraction, endothelium-induced, H783
- Carotid sinus
 - baroreceptors: *see* Receptors
 - denervation, arterial pressure control after, H910
 - pressure: *see* Pressure

- pulsatile pressure changes, baroreflex responses and, awake state, H673
- Carotid tissue, glucoreceptors, deep hypoglycemia and, E680
- Casein hydrolyzate
dietary regulation of transport, intestinal, G143
regulatory signals for transport, intestinal, G151
- Catalase, endothelium-dependent relaxation and, diabetic aorta, H825
- Catecholaminergic system, stimulation of CRH secretion, E463
- Catecholamines
acid secretion stimulated by, α_2 -receptor-mediated, jejunum, G640
arterial, changes in coronary occlusion, H704
central, chronic sinoaortic denervation effects, R768
constriction of lymphatics, H514
CRF and, immune function, R744
exercise-induced increment, metabolic role of, E428
gastric functions, CNS regulation of, G298
heart rate control, diabetes, E636
hepatocyte response to (sheep), R539
intestinal response, G18
metabolism, iron deficiency, temperature effects, R90
microdialysis, adipose tissue and blood in lipolysis studies, E737
oxygen consumption and, forearm, E572
plasma, cardiac hypertrophy, H452
pulmonary vascular reactivity, acute hypoxia, H329
release, acidotic stress and (trout), R395
secretion, excitation by capsaicin, E23
stimulation of CRH secretion, E463
- Cathepsin G, neutrophil, permeability and, type II pneumocytes, C603
- Cations
intracellular activity, oxytocin effects, skin epithelium (frog), C357
organic, transport, potential-driven, proximal tubules (flounder), R492
transport, glucocorticoid-induced, spinolactone effects, colon, F1235
- Cation channel, calcium-permeable, activation by IGF II, BALB/c 3T3 cells, C442
- Cation-proton antiport, organic, intestinal brush-border membrane vesicles, G85
- Caudal artery, endothelium-independent increases in cAMP, acetate and, H1378
- CCK: *see* Cholecystokinin
- CCK-8: *see* Cholecystokinin octapeptide
- Celiac ganglia, neuron activation, fast synaptic cholinergic, G759
- Cell: *see also* specific cell
swelling, hyposmotic, ADH and, medullary thick ascending limb, F962
uncoupling, protein kinase C and, C699
video microscopy, Nomarski and fluorescence imaging during, C566
volume: *see* Volume
- Cellular metabolism, insulin action and, C1
- Cellulose, colonic transit time and, radiographic analysis, G633
- Central nervous system
adrenal nerve excitation, capsaicin and, E23
contributions, hyperglycemia, E920
- deep hypoglycemia, glucoreceptors in carotid perfused tissue, E680
- interactions, vasopressin and aldosterone, R166
- regulation of gastric and autonomic functions, gastrin-releasing peptide, G298
- vasodepression, ANF-induced, H616
- vasopressin and catecholamines, chronic sinoaortic denervation effects, R768
- Centrifugation, equilibrium density gradient, renal renin granules, E353
- Cerebral artery
occlusion, microvascular morphometry during, H623
response after ischemia, reperfusion and, H879
- Cerebral ventricles
anteroventral, inhibition of paraventricular neurons, R961
fourth, low-dose bombesin and food intake, R988
- Cerebrospinal fluid
ion composition, long-term anoxia effects, diving (turtle), R338
peripheral glucose and insulin penetration, R200
physiological changes, during urethan anesthesia, R73
vasopressin and Met-Enk release in, hemorrhage effects, R731
- Cervical ganglia, norepinephrine turnover, genetic hypertension, H736
- cGMP: *see* Guanosine monophosphate, cyclic
- Charybdotoxin, membrane potential, parotid acini, C508
- Chemosensitivity, central, ventral medulla, R780
- Chenodeoxycholate, hydroxylated, protoporphyrin excretion and, liver, G382
- Chloralose, circulatory response and, α -receptor stimulation and blockade (lamb), H419
- Chloride
absorption, pH effects, intestine (flounder), G247
balance, potassium-depletion alkalosis, F763
brain and CSF composition, long-term anoxia effects, diving (turtle), R338
conductive transport, regulation, fibroblasts, C552
flux
furosemide effects on insulin release, β -cells, E591
sugar-stimulated, vertebrates and invertebrates, R583
hypotonic volume regulation and, proximal straight tubules, F353
intracellular activity, proximal straight tubules, F49
loop segment reabsorption, insulin effects, F1206
paracellular pathway, cortical collecting duct, F720
pump: *see* Pump
transport
adrenergic receptors in, corneal epithelium (frog), C724
cortical collecting duct, F220
is there a pump?, R677
placental microvillous membranes, fluorescence measurement, C789
transport pathways, fibroblasts, C112
uptake, DIDS excretion, G713
- Chloride-bicarbonate antiport
intracellular pH, skin (frog), F126
lacrimal gland, G367
norepinephrine effects, intestine, G18
sodium-dependent, pH regulation, glomerular mesangial cells, C857
- Chloride channel, basolateral, peritubular hypertonicity effects, F1128
- Chloride ion channel, hydrogen ion transport, renal cortical endosomes, F885
- Chlorine, subcellular electrolyte shifts, myocardial ischemia and reperfusion, H917
- Chlorophenylalanine, renal sympathoinhibition, during severe hemorrhage, H496
- Chloroquine, cellular processing of CCK-8 and, pancreatic acinar cells, G738
- Cholecystokinin
agonist-sensitive calcium pool, pancreatic acinar cells, G221, G229
binding, pancreatic acini (guinea pig), G106
cellular processing, pancreatic acinar cells, G738
gastric motility and emptying, capsaicin-sensitive vagal pathway, G242
G protein in, pancreatic acinar cells, E652
gradient in muscle cells, biliary tract, G647
independent ingestion and, neonate, R14
intestinal motility, pancreatic secretion and, G498
metabolism, endopeptidase 24.11 and, stomach (pig), G676
opiate interactions, behavioral evidence, neonate, R901
ornithine decarboxylase gene expression and, pancreatic, G818
receptors: *see* Receptors
responses and mechanics, proximal and distal colon, G787
satiety action of, pylorotomy effects, R1059
somatostatin release and, D-cells, G424
vagal gastric mechanoreceptors, G55
- Cholecystokinin antagonist
action, gastric emptying and, G685
characterization of, G261
- Cholecystokinin octapeptide
binding, pancreatic acini (guinea pig), G106
cellular processing, pancreatic acinar cells, G738
changes induced by, gastric emptying and feeding, R21
food intake and gastric emptying with, after pylorotomy or pyloroplasty, R113
gastric emptying, opiates and, G158
- Cholesterol
composition, hormone effects, testes, E442
metabolism
acetyl-CoA hydrolase activity relations, R724
regulation in aorta, fetus, H160
- Cholesteryl ester, transfer protein, high-density lipoprotein regulation of lipids, E894
- Choline, TEA transport and, renal tubules (snake), F167
- Cholinergic inhibition, pertussis toxin-sensitive, D-cells, G424

- Cholinergic innervation, excitatory, portal and mesenteric veins, H288
- Cholinesterase, excitatory innervation, portal and mesenteric veins, H288
- Chorda tympani nerve, sodium-chloride taste response, residual, R1002
- Chromatography
high-performance liquid, intracellular pathways of insulin transport (calf), C459
- lectin affinity, clearance of glycosylated α -amylase, G374
- Chromosomal walking, inborn errors, physiological processes revealed through, F1047
- Chymotrypsin
inactivation of lipase, G476
- treatment, pancreatic enzyme secretion and, G236
- Cimaterol, energy metabolism and, R952
- Cinefluorography, biplane, linear transformation and ellipsoid models, H197
- Circadian clock, protein synthesis phase shifts, inhibitor of (hamster), R1055
- Circadian rhythm: *see* Rhythm
- Circulation: *see also* Blood flow; Microcirculation
- cerebral
arginine vasopressin effects, H70
- postischemic generation of superoxide anion, H401
- coronary, pulmonary inflation reflex and, H866
- enterohepatic, gallbladder cyclic motor activity, G409
- extracorporeal, pump perfusion effects, H280
- hepatic, new method of portal vein cannulation, G191
- intestinal, arterial hypoxia and isoproterenol effects (swine), H1144
- peripheral, central and local hypoxia, H760
- pulmonary
after chloralose (lamb), H419
- biogenic amines in acute hypoxia, H329
- combined neurohumoral block and, awake state, H1084
- pentobarbital anesthesia effects, H569
- splanchnic, awake state, G522
- vasodilatory therapy effects, pulmonary hypertension, model, H1232
- Citrate
excretion, role in acid-base balance, F182
- reabsorption, pH effects, proximal convoluted tubule, F301
- Clearance, renal, ANP, E934
- Coenzyme A, DHEA treatment and, obesity, E1
- Colchicine, antidiuretic response and, urinary bladder (frog), F1098
- Cold
acclimation, tropic changes in brown fat during, R874
- enhanced pressor response, spontaneous hypertension, H1018
- exposure
brown fat nuclear T_3 receptors, E496
- lateral hypothalamic lesions, E708
- sympathetic nervous system responses, skeletal muscle, E180
- Collagen, synthesis and degradation, during compensatory lung growth, C754
- Collagenase, renal, protease effects on adenylate cyclase, F1033
- Colon
contractile activity, high-amplitude propagated, G660
- decreased secretion, aging and, G72
- distal
electrolyte transport, sodium depletion and, G329
- synaptic behavior of myenteric neurons (guinea pig), G184
- glucocorticoid-induced cation transport, spironolactone effects, F1235
- growth, neurotensin stimulation of, G813
- proximal
electrical slow waves of, membrane potential effects, C828
- intestinal anaphylaxis, G201
- response to neuropeptides, regional differences, G787
- restitution of function, after acute mucosal injury (pig), G62
- smooth muscle cell contraction, prostaglandin E_2 effects, G807
- transit, quantitative measurement, G529
- transit time, dietary fiber effects, G633
- Colonic cell, prostaglandin E_2 responses, protein kinase C effects, G27
- Compartmental analysis, solute transfer, across blood-nerve barrier, R317
- Compartmentation, cellular, ischemic myocardium, H929
- Computer analysis
lower esophageal sphincter relaxation, G794
- simulation, hormone secretion, pulse-detection algorithms, E775
- steady-state, pancreatic islet discrimination, hexose anomers, E189, E201
- Copper, plasma, poly I:C effects, R748
- Cordycepin, modulation of sodium-inorganic phosphate cotransport and, kidney cells, C155
- Corneal epithelium, chloride transport, adrenergic receptors in (frog), C724
- Coronary arterioles, subepicardial and subendocardial, myogenic activity in (pig), H1554
- Coronary artery
adrenergic vasoconstriction, receptor subtype distribution and (calf), H1452
- α_2 -adrenoceptor activity, dual control of blood flow, H250
- calcium influx, adenosine effects, H1492
- calcium pumps, superoxide radical effects, C297
- constriction, flow-mediated attenuation, H1317
- diameter, flow-mediated attenuation, H1317
- dilation, carotid chemoreceptor stimulation, H1330
- flow
development effects (guinea pig), H1460
- intramyocardial pressure and, model, H664
- occlusion
changes in adrenal sympathetic nerve activity and arterial catecholamines, H704
- neutrophil accumulation and, H1060
- reperfusion and, myocardial neutrophil accumulation, H1188
- selective cardiac denervation effects, awake state, H525
- serotonergic responsiveness, inhibitors of cyclooxygenase and, H1023
- Coronary resistance bed, endothelium-dependent dilation, free radical inhibition of, H765
- Coronary veins, nutritional capacity, pressure-flow relations, H834
- Corticosterone
ACTH release, CRF infusion effects, E213
- circadian variation in response, CRF-41 and AVP, E265
- inhibition, ACTH, E241
- mirex-induced adaptive liver growth, hepatocytes and, G132
- obesity effects, adrenocortical cells, E229
- release, lymphokines and ACTH, R839
- secretion, adrenal gland changes during aging, E903
- sodium transport and, A6 cells, F736
- Corticotropin-releasing factor
activation, autonomic nervous system, R744
- angiotensin II effects and, ACTH and vasopressin release, awake state, E46
- chronic intracerebroventricular, ACTH-corticosterone release and, E213
- circadian variation in response to, E265
- glucocorticoid feedback, corticotrope, E241
- intake, brown fat thermogenesis and, E255
- plasma concentration, vasopressin infusion effects, awake state, R665
- secretion, regulation by glucose, E287
- Corticotropin-releasing hormone, secretion, central catecholaminergic system and, E463
- Cortisol
action, amino acid kinetics and, E366
- β -adrenergic mechanisms and, insulin action, E33
- exercise-induced increment, metabolic role of, E428
- inhibition, ACTH, E241
- maternal, ACTH and renin secretion and, fetal (sheep), R412
- plasma concentration, vasopressin infusion effects, awake state, R665
- secretion, drinking and, during dehydration (pig), R249
- vasopressin effects, adrenal steroidogenesis, R806
- Coupling
activation-contraction, myosin phosphorylation, smooth muscle, C719
- aortic-ventricular, aortic input impedance, model, H742
- electrical
colonic smooth muscle, C653
- gap junctional channels, heart cells, neonate, H770
- excitation-contraction, prostaglandin E_2 effects, colon, G807
- stimulus-secretion
lacrimal gland, G367
- parotid acini, C508
- Creatine, extraction, physiological dose of ANP and, F907
- Creatine phosphate
intracellular pH and, myocardial, H189
- myocardial respiratory control, H185
- CRF: *see* Corticotropin-releasing factor
- CRH: *see* Corticotropin-releasing hormone

Cross-bridge cycling, regulation of shortening velocity, smooth muscle, model, C86
 Crown ether, potassium-selective microelectrodes, C408
 Crystal
 absorption, urine inhibition, F1197
 binding, papillary epithelial cells, F1025
 Cuneate nucleus, dorsal medulla, microinjection of ANF, cardiovascular responses, R182
 Current
 fast inward, ventricular cells, embryo (chick), H540
 short-circuit, corticosterone's metabolite and, A6 cells, F736
 slow inward, acetylcholine in AV node, H7
 Cushing's syndrome, potassium regulation, aldosterone role in, F811
 Cycloheximide
 gastric mucosal, gastrin effects, G305
 nicotinamide and phosphate transport, renal brush-border membrane, F15
 Cyclooxygenase
 inhibition, serotonin permeability and, lung, H1096
 inhibitors of, serotonergic responsiveness in coronary artery and, H1032
 pathway inhibition, pulmonary vasoconstriction and, awake state, H1084
 Cyclooxygenase metabolites, organ blood flow and, endotoxic shock (pig), H177
 Cyproheptadine, pump perfusion, autoregulation and, H280
 Cystic duct, muscle cells, functional gradients from, G647
 Cytochalasin B, apical membrane responses to ADH and, urinary bladder (toad), C526
 Cytochrome P-450
 inhibition of oxygen responses, cheek pouch arterioles (hamster), H711
 renal, arachidonate metabolism related to, aortic coarctation, F151
 Cytokines, enhancement of slow-wave sleep, R748
 Cytoprotection, gastric ulceration and injury, model, G395
 Cytosol, renal, growth hormone and prolactin receptors in, E293
 Cytotoxicity, natural killer, CRF effects, R744

D

D-Cells, somatostatin release from, cholinergic inhibition, G424
 Deconvolution technique, numerical, hydrocortisone secretion (horse), E688
 Deferoxamine, acute renal failure and, F539
 Defibrillation, ventricular, unsuccessful, epicardial activation after, H902
 Dehydration
 accumulation of major organic osmolytes, renal inner medulla, F626
 adrenergic control of renin in, awake state, E793
 angiotensin II levels, during drinking, R500
 arginine vasopressin during, awake state, R46
 glycerol-induced renal failure, F438
 locally mediated vasodilation and, hindlimb (baboon), H266
 phosphate metabolites and, renal, NMR studies of, F581
 rehydration and, maternal (sheep), E674
 Dehydroepiandrosterone, short-term administration, liver metabolism, obesity, E1
 Dehydrogenase, activity, activation of, cardiac respiration and, H185
 Deoxycholate
 acute mucosal injury with, restitution of colonic function after (pig), G62
 hydroxylated, protoporphyrin excretion and, liver, G382
 Deoxycorticosterone acetate, peritubular potassium increase, cortical collecting tubules, F108
 Deoxyglucose, metabolism, insulin effects, E806
 2-Deoxyglucose
 paratrigeminal nucleus, entrance to hibernation (squirrel), R178
 uptake, melatonin effects, suprachiasmatic nucleus, R332
 2-Deoxy-D-glucose
 hyperglycemia due to, autonomic nervous system in, E928
 metabolic control of feeding and, R82
 regulation of CRF secretion, E287
 Deoxyribonucleic acid
 gene transfer mediated by, mammalian potassium channel, C12
 synthesis, parathyroid hormone and, osteoblasts, E9
 Deuterium, presence in water, measurement by infrared absorbance, R175
 Development: *see also* Growth; Maturation
 bacterial endotoxin, pituitary-adrenal response to, E525
 brain, ketone body transport, C133
 bronchiolar epithelium, postnatal undernutrition effects, R521
 changes in tubular capacity, phosphate reabsorption, F278
 infant, maternal photoperiodic history and (vole), R831
 postgastric controls, feeding behavior, preweanlings, R191
 postnatal intestinal circulation, arterial hypoxia and isoproterenol effects (swine), H1144
 stomach, CCK effects on satiety, neonate, R14
 Dexamethasone
 cation transport induced by, spironolactone effects, colon, F1235
 differentiation and, A6 cells, C661
 glutamine synthetase expression and, skeletal muscle, E397
 hypertension reversal and, one-kidney, one-clip hypertension, H717
 secretion, adrenal gland changes during aging, E903
 Dextran, clearance, acute renal failure, F257
 DHEA: *see* Dehydroepiandrosterone
 Diabetes
 captopril effects, renal response to amino acid infusion, F755
 cholesterol metabolism, acetyl-CoA hydroxylase activity relations, R724
 endothelium-dependent relaxation of aorta, oxygen free radical effects, H825
 heart rate control in, E636
 increased SR phospholipid N-methylation, skeletal muscle, E347
 neuroeffector system, vascular α -adrenergic, H1036
 nucleotide synthesis and, glomerular, F647
 satiating effects of fat, R123
 somatic growth and, food restriction effects, adrenalectomy and, R787
 Diabetes mellitus
 insulin-like growth factor I receptors, renal glomeruli and tubules, E504
 insulin release, furosemide effects, β -cells, E591
 insulin resistance of, sialic acid role in, E173
 intestinal hyperemia associated with, glucagon role in, G542
 Diacylglycerol
 orally fed, absorption and metabolism, G612
 phosphoinositide hydrolysis, LLC-PK₁ cells, C502
 PTH effects, osteoblast-like cell line, E660
 Diacylglycerol kinase inhibitor R59022, stimulated neutrophil response and, C589
 Diaphragm, sodium-potassium-ATPase isoforms, thyroid hormone, E912
 Diazoxide, glucose inhibition of insulin release and, E422
 Dibenzo-18-crown-6, potassium-selective microelectrodes, C408
 Dicarboxylic acid, respiration, membrane potential, and potassium, proximal tubule, F1170
 DIDS: *see* Diisothiocyanostilbene disulfonate
 Dietary fiber, colonic transit time and, radiographic analysis, G633
 Diethylmalate, oxygen stress and, renal proximal tubules, F874
 Diethylstilbestrol, biliary secretion, lipid particles and, G745
 Diet: *see* Feeding
 Difluoromethylornithine
 compensatory growth and, renal, F270
 gastric mucosal, gastrin effects, G305
 Dihydrotestosterone, body size and composition and, adult (monkey), E857
 Diisothiocyanostilbene disulfonate
 biliary excretion, bicarbonate effects, G713
 chloride transport and, fibroblasts, C552
 Dimaprit, gastric emptying and (monkey), G767
 Dimethyl sulfoxide, metallothionein response, stress, liver, E518
 Dimethylthiourea, glycerol-induced renal failure and, F438
 Dipeptides
 carrier-mediated transport, renal brush-border membrane vesicles, C822
 transport, proximal straight tubules, F177
 1,3-Dipropyl-8-p-sulphophenylxanthine, adenosine and noradrenergic neurotransmission, H386
 Dithiothreitol, cellular processing of CCK-8 and, pancreatic acinar cells, G738
 Diuresis
 α_2 -adrenoceptor agonist-induced, F317
 ANF secretion, renal responses, F936
 low-dose ANP infusion and, anesthesia, R449
 pressure, NE-ACTH hypertension and, R894

- Diuresis (*continued*)
 renal nerves, volume expansion and (monkey), R388
 salt adaptation, ANF and (fish), F1281
 Diving, long-term anoxia, brain and CSF ion composition (turtle), 338
 DNA: *see* Deoxyribonucleic acid
 L-Dopa, inhibition, sodium-potassium-ATPase activity, cortical tubule cells, F666
 Dopamine
 locally formed, inhibition of sodium-potassium-ATPase activity, cortical tubule cells, F666
 plasma, regulation in renal blood flow, R379
 receptors: *see* Receptors
 release, PAF effects, PC-12 cell line, C559
 Doppler system, large artery response, norepinephrine in hypertension, H36
 Dorsal medulla, microinjection of ANF, cardiovascular responses, R182
 Doxazosin, cold-induced vasoconstriction and, finger skin, H1000
 Drinking
 controlled, hydrogen homeostasis, osmolality, and body temperature during, R97
 cortisol and vasopressin secretion, during dehydration (pig), R249
 during angiotensin II intravenous infusion, plasma angiotensin II levels, R500
 response to angiotensin II, paraventricular nucleus lesion effects, R882
 sodium appetite and, angiotensin-related (cow), R205
 thirst mechanisms, R217
 Duodenum
 bicarbonate secretion
 basal and prostaglandin E₂ stimulation of, G470
 splanchnic nerve stimulation and, G709
 calcium absorption, verapamil effects, E702
 field stimulation, opioid receptors, G352
 norepinephrine turnover, genetic hypertension, H736
 proximal, emptying of liquid meals, G93
- E**
- Edema, postburn, negative interstitial fluid pressure and, H1069
 EEG: *see* Electroencephalography
 Eicosanoid
 excretion, urinary, leg exercise and, H15
 release, superoxide dismutase effects, necrotizing enterocolitis, G556
 transmembrane signaling, leukotriene receptors, C771
 Ejection fraction, ventricular, linear transformation and ellipsoid models, H197
 Elastic parameters, brain, R799
 Electrical slow waves, membrane potential effects, proximal colon, C828
 Electroencephalography
 analysis of non-REM sleep, R27
 MSH and interleukin interactions, effects on sleep, behavior, and brain temperature, R914
 Electrolytes
 cellular compartmentation, ischemic myocardium, H929
 responses to hypoxia, awake state (sheep), R274
 secretion, lacrimal gland, G367
 sodium chloride dietary intake, regulation of carbon dioxide ventilation and, R105
 subcellular, shifts, myocardial ischemia and reperfusion, H917
 transport
 buccal mucosa, G286
 ileal, leukotrienes in, G175
 radioisotope flux measurements, G696
 sodium depletion effects, distal colon, G329
 Electromechanical activity, leukotriene C₄ effects, taenia coli (guinea pig), C433
 Electroosmosis, cell membrane water permeabilities, streaming currents and, proximal tubules (salamander), F188
 Electrophoresis, myosin heavy chains, cardiac, separation, H659
 Electrophysiology
 calcium currents, hypertrophied ventricular myocytes, H1434
 conduction pathway through AV node, computer algorithm for modeling transmission, H1247
 cultured epithelial cells, sweat gland, C102
 fast synaptic cholinergic activation of neurons, celiac ganglia, G759
 glutathione efflux, membrane potential difference and, liver, G547
 sex differences in membrane potential, liver, G822
 sodium chloride taste response, residual, R1002
 Embryo
 developing epithelium, blastocyst transport functions, C419
 ventricular cells, fast inward current (chick), H540
 Embryogenesis, excitatory cholinergic innervation, H288
 Endocrine glands, episodic signaling, general biophysical model, E749
 Endocrine response, intravenous endothelin, awake state, R1064
 Endocytosis
 fluorescent characterization, collecting duct cells, F1003
 ouabain uptake by, atria (guinea pig), C479
 protein metabolism, renal tubular, F520
 Endolymph, secretion, semicircular canals (shark), F711
 Endoneurium, solute transfer, compartmental analysis, R317
 Endopeptidase 24.11, gastrin and CCK metabolism by, stomach (pig), G676
 Endopeptidases, neutral, protein digestion in small intestine and, G212
 Endoplasmic reticulum, parotid gland, hydrogen-dependent calcium uptake, G429
 Endosomes
 intracellular fate, liver, C70
 renal cortical, hydrogen ion transport, F885
 Endothelial cells
 acetylcholine-stimulated, hyperpolarization and increased free calcium in, H965
 aortic
 ACh-induced calcium transients in, H1549
 calcium influx, bradykinin stimulated, H219
 GTP γ S loading, phospholipase C and ATP receptors, C667
 stimulation of proliferation, adenosine and hypoxia in, H554
 water permeability, temperature effects (calf), C311
 Endothelial injury, vascular reactivity and, monocrotaline pulmonary hypertension, H1484
 Endothelin
 cardiovascular, renal, and endocrine response, awake state, R1064
 vasoconstrictor peptide, inotropic action of, atria (guinea pig), H970
 Endothelium-derived relaxing factor
 angiotensin II-induced vasodilation, aorta (fowl), R591
 arterial smooth muscle, H207
 bioassay of, H1259
 calcium transients, ACh-induced, H1549
 dilation in coronary resistance bed, oxygen free radical inhibition, H765
 enhanced release, blood flow increase and, H446
 independent blockade, cerebral vasodilation, H847
 pressure-induced contraction, carotid arteries, H783
 red cell velocity, contracting muscle and (hamster), H236
 Endotoxemia, myocardial metabolism and coronary flow with, H1295
 Endotoxin
 bacterial, pituitary-adrenal response to, during growth, E525
 corticosterone-releasing effects and, R839
 fever induced by, sympathetic nervous system and brown fat effects, E617
 increases in glucose metabolism, adrenergic blockade effects, E629
 protein synthesis, muscle glutamine and, E166
 Energy
 balance
 adrenalectomy, starch and glucose effects, R141
 fasting-refeeding cycle effects, E120
 short-term, regulation, E332
 expenditure, measurement of water by infrared absorbance, R175
 metabolism
 cimaterol effects, R952
 during circulatory occlusion, skeletal muscle, C140
 interleukin 1 and tumor necrosis factor role, E760
 liver (hummingbird), R699
 myocyte deenergization, calcium dynamics and, C162
 thyroid hormones and, E146
 regulation, acceleration by group housing, R128
 retention, adrenalectomy effects on brown fat metabolism, E597
 storage, proximal artery, pressure-flow loop area and, H1405
 utilization, meal frequency effects, R616
 Enkephalinase, gastrin and CCK metabolism by, stomach (pig), G676

- Enteric nervous system
neuropeptide responses, colon, G787
serotonin receptor localization, G603
synaptic behavior, distal colon (guinea pig), G184
- Enterocolitis, necrotizing, eicosanoid release, superoxide dismutase effects, G556
- Enterocytes, succinate transport and metabolism, sodium effects, C95
- Enterogastrone, somatostatin and neurotensin monoclonal antibodies and, G40
- Enterotoxin, *E. coli*, receptors and cGMP signalling mechanism in, kidney (opossum), F1040
- Enzymes: *see also* specific enzyme
liver (hummingbird), R699
- Epidermal growth factor
ontogenesis of, liver, E28
renal tubular cells, F1191
vascular smooth muscle cells and (horse), C447
- Epinephrine
adrenal medullary secretion, excitation by capsaicin, E23
 β -adrenergic mechanisms and, insulin action, E33
adrenergic stimulation and, ANP release, E260
arterial, changes in coronary occlusion, H704
cAMP and, obesity, pancreatic islets, E833
excretion, during leg exercise, H15
exercise-induced increment, metabolic role of, E428
glucose intolerance and, thyrotoxicosis, E843
glucose metabolism and, endotoxemia, E629
hyperglycemia, CNS-mediated, E920
infusion, intravenous glucose tolerance and, E668
intravenous endothelin effects, awake state, R1064
plasma renin activity and, awake state, E793
platelet activation and, H1276
somatostatin release and, D-cells, G424
turnover, genetic hypertension, H729, H736
vagab activity, hypotensive lower-body negative pressure effects, R149
- Epineurium, solute transfer, compartmental analysis, R317
- Epithelial cells
gallbladder, apical membrane, potassium conductance (guinea pig), C808
monolayers, oxidants and conductance of, C781
renal, PDGF-like protein secretion (monkey), F800
sweat gland, different physiological signatures, C102
tracheal
differentiated properties, C760
growth and function, hormone effects, C237
- Epoxy-eicosatrienoic acid, histamine stimulation of, endothelial cells, C214
- Erythrocytes
ghosts, potassium transport, C346
intracellular pH and inorganic phosphate content, heart, H189
potassium-rubidium fluxes in, ouabain resistance (sheep), C331
thermoregulation and blood volume, exercise-heat stress, R456
velocity, during functional hyperemia (hamster), H236
volume regulatory response, intracellular signals and (skate), R982
- Erythrocythemia, polycythemia and thermoregulation, exercise-heat stress, R456
- Erythrocytosis, adenylate cyclase in, neuropeptide Y mobilizes calcium, E880
- Erythron, transferrin-iron receptor relations, R326
- Esophageal sphincter
lower
relaxation, computer analysis, G794
response to distension (opossum), G587
neural control, G441
- Esophagus
ion absorption, sugar-stimulated, vertebrates and invertebrates, R583
responses, transient and sustained distension (opossum), G587
- Estradiol, angiotensinogen synthesis and, hepatocytes, E70
- 17 β -Estradiol, LH response and, arachidonic acid and protein kinase C, E314
- Estrogen, bone density and, during growth, E416
- Estrous cycle
melatonin entrainment, activity rhythms and, female, R237
vasopressin secretion during, R1041
- Ethanol
portal blood flow increase and, G417
vasoaction, gastric submucosa, arachidonic acid effects, G731
- Ethylisopropylamide
pH regulation, glomerular mesangial cells, C844, C857
sensitivity to, sodium-hydrogen exchange and, LLC-PK₁ mutant, C495
- N-Ethylmaleimide
internal anal sphincter relaxation, G571
potassium transport and, erythrocyte ghosts, C346
- Eucapnia, hormonal and electrolyte responses to, awake state (sheep), R274
- Euglycemia, loop segment chloride reabsorption, insulin and, F1206
- Euglycemic clamp, glucose kinetics during, isotope infusion effects, E871
- Euhydration, adrenergic control of renin in, awake state, E793
- Exercise
blood flow in muscle during, awake state, H1509
epinephrine increment induced by, metabolic role of, E428
forearm, lactic acid generation, systemic pH effects, F479
heat stress, thermoregulation and blood volume, R456
high-fat diet and, lipoprotein lipase in white and brown fat, R226
intensity, MDA content and, skeletal muscle, C874
isometric contraction, head production, anococcygeus muscle, C536
- leg, prostacyclin and thromboxane A₂ metabolite excretion during, H15
regulation, triiodothyronine metabolism, E824
reproductive quiescence and, exogenous melatonin-induced (hamster), R718
- running
glucose production, metabolic feedback regulation in, R400
muscle and blood metabolic changes (greyhound), R513
muscle composition and (lizard), R470
muscular glucose clearance, E456
subcellular binding of glycolytic enzymes, muscle (fish), R289
substrate exchange during, limb muscle, H1156
training, baroreflex regulation of nerve activity and, H974
treadmill running, liver fructose 2,6-bisphosphate in, R38
venomotor responses, central and local hypoxia, H760
- Exocytosis, granule swelling, osmotic forces and, F1
- Exotoxins, bacterial, endothelial permeability and, C368
- Extensor digitorum longus muscle, sodium-potassium transport, thyroid hormone effects, E604

F

- Fasting
adrenalectomy and, denervated muscle, E850
diet effects, sympathetic nervous system responses, skeletal muscle, E180
food intake and, sympathetic activity, R284
glutamine concentration, protein synthesis relations, muscle, E166
GnRH sensitivity, prepubertal females, E482
lactate production, regional, adipocytes, E716
refeeding and, repeated cycle effects on brown fat composition, E120
- Fat
balances, short-term energy balance relations, E332
body, melatonin and, adults (hamster), R812, R823
epididymal, development, thyroid status and, E280
satiating effects of, diabetes, R123
- Fat cells: *see* Adipocytes
- Fatty acid intermediates, mechanical recovery during reflow and, heart (swine), H169
- Fatty acids
composition, hormone effects, testes, E442
free
epinephrine in exercise, E428
exercise at reduced blood flow, limb muscle, H1156
orally fed, absorption and metabolism, G612
prolonged hypothermia and, R1035
oxidation
myocardial, H441
reversal of stunning, heart (swine), H169
secretin release, small intestine, G7

Fatty acids (*continued*)

- synthesis
 - adrenalectomized obese mice, R141
 - liver (hummingbird), R699
 - volatile, cAMP and, caudal artery, H1378
- Feedback
 - metabolic, role in glucose production, running and, R400
 - negative inhibition, fetal ACTH and renin, maternal cortisol effects (sheep), R412
 - tubuloglomerular
 - adenosine analogue effects, F33
 - peritubular infusion of angiotensin and, F383
 - renal function, diabetic adults, F755
- Feeding
 - aging and, glomerular filtration rate and proteinuria, awake state, F250
 - antral gastrin release, after a meal, G665
 - appetite, sodium, strain differences, R424
 - body size and composition, androgenic influences (monkey), E857
 - brown fat thermogenesis and, CRF effects, E255
 - CCK action, pylorotomy effects, R1059
 - CCK-8 effects, after pylorotomy or pyloroplasty, R113
 - CCK properties, vagal gastric mechanoreceptors, G55
 - conditioned flavor preference, intragastric starch infusion and, R672
 - diet
 - adrenalectomy and, denervated muscle, E850
 - regulation of carnitine transport, intestinal, G143
 - sympathetic nervous system responses, skeletal muscle, E180
 - endogenous sugar acid effects, ventromedial hypothalamic neurons and, R134
 - energy balance and, adrenalectomized obese mice, R141
 - fasting-refeeding repeated cycles, brown fat composition and, E120
 - fat
 - satiating effects, diabetes, R123
 - test meals, gastric emptying, endogenous opiate involvement, G158
 - food deprivation, voluntary sodium intake and, R1025
 - food intake regulation, CSF glucose and insulin penetration, R200
 - gastric emptying and, CCK-8-induced changes, R21
 - hedonic food intake, voluntary sodium intake and, R1025
 - high-carbohydrate diet, energy metabolism and, R952
 - high-fat diet
 - energy metabolism and, R952
 - exercise and, lipoprotein lipase in fat, R226
 - 3-OHB and insulin effects on obesity, model, R974
 - independent ingestion, CCK effects, neonate, R14
 - liquid meals, gastric emptying of, antro-pyloroduodenal activity in, G93
 - low-dose bombesin effects on food intake, fourth ventricle, R988
 - low-iodine diet, circadian period and (hamster), R1

- maternal influences, offspring development (vole), R831
- meal frequency, energy utilization and, R616
- melatonin and
 - long-day responses and short-day housing (hamster), R823
 - short-day responses (hamster), R812
- metabolic control, after 2-deoxy-D-glucose and nicotinic acid injection, R82
- nutrient and nonnutrient meals, jejunal motor patterns after, G800
- oral, linoleic and arachidonic acid metabolism, G612
- postgastric controls, preweanlings, R191
- restriction, somatic growth and diabetes, adrenalectomy and, R787
- sham, intestinal nutrient-induced, capsaicin effects, R569
- sodium appetite
 - angiotensin related (cow), R205
 - pregnancy and lactation effects, R1020
- soya flour, pancreatic growth after partial resection, G670
- starvation and, sympathetic activity, R284
- taste transduction, spatial map of salts and saccharides, tongue, R117
- underfeeding, GnRH sensitivity, prepubertal females, E482
- undernutrition, postnatal, bronchiolar epithelium development and, R521
- Femoral arteries
 - flow-induced enhanced relaxation, acetylcholine, H446
 - vascular mechanics, intramural lymphostasis and, H1289
- Fenoldopam, ANF and dopamine receptor effects, renal, F494
- Fetus: *see also* Lactation; Placenta; Pregnancy
 - ACTH and renin, maternal cortisol effects (sheep), R412
 - β -adrenoceptor responses, maturation of (lamb), R794
 - cholesterol metabolism, aorta, H160
 - glucose kinetics, somatostatin and glucose infusion effects (sheep), E87
 - glycogen precursors (sheep), E743
 - mature and immature, hormonal responses to hypotension (lamb), R67
 - plasma and urinary responses, maternal dehydration and rehydration (sheep), E674
 - renal function, maternal hyperglycemia effects (sheep), F11
 - SV40-transformed hepatocytes, growth-dependent regulation of system A in, C261
 - urine flow, vascular volume expansion and (sheep), R846
 - ventilation and oxygenation, in utero response, cerebral (sheep), R1049
- Fever
 - endotoxin-induced, sympathetic nervous system and brown fat effects, E617
 - interleukin 1- α -induced, indomethacin effects, R527
 - MSH and interleukin interactions and, R914
 - sleep and, muramyl-dipeptide-induced, R157
 - thermoregulation and, changes during urethane anesthesia, R73

- Fibrillation, atrial, low potassium and, H1359
- Fibrinogen, platelet, receptor exposure, H651
- Fibroblasts
 - cardiac, nonrandom turnover of actin and tubulin, C202
 - chloride transport pathways, C112
 - regulation of, C552
- Fibronectin, clearance, during bacteremia after surgery (sheep), H1421
- Filtration
 - glomerular
 - β -agonist effects, awake state, H592
 - amino acid and hormone level effects, F444
 - angiotensin II receptors, E16
 - ANP and volume expansion, F66
 - changes, vasotocin-induced antidiuresis (kelp gull), R936
 - during sodium deprivation, F823
 - kinins and, F408
 - metabolic clearance of ANP, E934
 - physiological dose of ANP and, F907
 - pressure natriuresis during hypertension, R756
 - proteinuria and, feeding and aging effects, awake state, F250
 - protein, kidney (trout), R418
- Flow
 - coronary, effects of LTC₄ and TxA₂, H153
 - rate, ammonia loss and, proximal tubule, F861
- Flowmetry, laser-Doppler, blood flow and secretion of salt glands, VIP effects (duck), R575
- Fluid
 - amniotic: *see* Amniotic fluid
 - body, volume, age-related changes, hypertension, F953
 - cerebrospinal: *see* Cerebrospinal fluid
 - extracellular, antioxidant properties of, allopurinol effects, H202
- filtration
 - lung, perfusion effects (lamb), H1336
 - microvessel, cyclooxygenase-inhibited lung, H1096
 - redistribution, hyperosmotic resuscitation, H629
 - secretion, lacrimal gland, G367
 - subcutaneous interstitial, ion concentrations in, F513
- Fluorescence
 - lipid order, MDCK cells, F22
 - measurement of chloride transport, placental microvillous membrane, C789
 - Nomarski and, video microscopy of cells, C566
- Follicle-stimulating hormone
 - GnRH sensitivity, underfeeding and, prepubertal females, E482
 - melatonin and, adults (hamster), R812, R823
- Folypolyglutamate, intestinal absorption, analysis of sequential events, G361
- Food intake: *see* Feeding
- N-Formyl-methionyl-leucyl-phenylalanine, superoxide dismutase and, necrotizing enterocolitis, G556
- Forskolin
 - calcium-activated potassium channels and, aortic smooth muscle cells, H754

- chloride transport and, corneal epithelium (frog), C724
 DNA synthesis and pH depression, osteoblasts, E9
 postnatal maturation, papillary muscle, H335
 VIP receptors and, desensitization, heart, H601
Freeze-fracture study, myocardial sarcolemma, ischemia, H467
Freshwater, catecholamine release, acidotic stress and (trout), R395
Fructose
 glutathione efflux and, hepatocytes, G403
 kinetics, carbohydrate feeding and, E236
Fructose 2,6-bisphosphate, hepatic, treadmill running and, R38
Fucose, terminal residues, clearance of glycosylated α -amylase, G374
 α -Fucosidase, clearance of glycosylated α -amylase, G374
Fura-2
 adenosine and intracellular calcium, cortical collecting tubule cells, C581
 bradykinin action, proximal tubule, F486
 conversion, liver mitochondria, C304
 cytosolic calcium and, glomerulosa cells, E338
 differential interference contrast, fluorescence imaging and, cells, C566
 measurement of calcium influx, aortic endothelial cells, H219
 monitoring of calcium uptake, membrane vesicles, C694
 vasopressin action, calcium transport, bladder cells (toad), F1015
Furosemide
 active ammonium absorption, thick ascending limb, F57
 adaptation to sodium delivery and, distal tubule and collecting duct adaptation to, F1256, F1269
 benzodiazepine effects and, oxygen consumption, thick ascending limb, C385
 hypotonic volume regulation and, proximal straight tubules, F853
 insulin release and, β -cells, E591
 intracellular chloride activity and, proximal straight tubule, F49
 sodium-hydrogen exchange and, renal cells (opossum), C76

G

GABA: see γ -Aminobutyric acid
Gallbladder
 CCK receptor, labeling using probes, G579
 cyclic motor activity, G409
 muscle cells, functional gradients from, G647
 muscularis smooth muscle cells, culture behavior, G653
 pancreatic acinar cells and, CCK receptors on, G512
Gas
 blood
 during urethan anesthesia, R73
 evaluation of sample, R851
Gastric acid
 formation, stimulation by valinomycin, permeable gastric glands, G313
 secretion
 CNS regulation of, G298
 histamine receptor stimulation (monkey), G767
 immunoneutralization effects, G40
Gastric antrum
 antropyloroduodenal activity, emptying of liquid meals, G93
 gastrin release, after a meal, G665
 neurokinin effects, G779
Gastric distension
 blood flow, awake state, G522
 passive, physiological enteric stimulation, G319
Gastric emptying
 capsaicin-sensitive vagal pathway, cholecystokinin effects, G242
 CCK antagonist effects, G685
 CCK-8 effects, R21
 after pylorotomy or pyloroplasty, R113
 CNS regulation of, G298
 histamine receptor stimulation (monkey), G767
 liquid meals, antropyloroduodenal activity in, G93
 regulation, endogenous opiate involvement, G158
 satiating effects of fat, diabetes, R123
Gastric glands, permeable, valinomycin stimulation of acid, G313
Gastric mucosa
 epithelial injury, G395
 injury, restitution of colonic function after (pig), G62
 ornithine decarboxylase, gastrin effects, G305
 protection, prostaglandin metabolite effects, G723
Gastric nerve, unequal bulbospinal influences on, R946
Gastric secretion, endopeptidase 24.11 and, stomach (pig), G676
Gastric submucosa, ethanol vasoaction in, arachidonic acid metabolite effects, G731
Gastric ulceration, model, G395
Gastrin
 antral, release after a meal, G665
 inositol lipid turnover and, gastric parietal cells, G99
 intestinal motility, pancreatic secretion and, G498
 localization, ornithine decarboxylase, gastric mucosa, G305
 metabolism, endopeptidase 24.11 and, stomach (pig), G676
 release, calcium and bombesin in, stomach, G627
 secretion, gastrinoma cells, G596
Gastrinoma cells, gastrin secretion, G596
Gastrin-releasing peptide, regulation, gastric and autonomic functions, G298
Gastrocnemius muscle, blood flow: see Blood flow, muscle
Gastrooduodenal mucosa, necrosis, paraventricular nucleus stimulation and, R861
Gastrointestinal hormones, responses and mechanics, proximal and distal colon, G787
Gastrointestinal tract
 transit time, radiographic analysis, G633
 ulceration, prostaglandin metabolite effects, G723
GDP: see Guanosine diphosphate
Gene expression
 ANF, cardiac tissue, perinatal, E388
 ANF, sodium intake effects, H245
 ornithine decarboxylase, CCK effects, pancreas, G818
 renin, structure, F563
Gene transfer, potassium channel, mammalian, C12
Gentamicin, nephrotoxicity, microsomal protein synthesis inhibition, F265
Gestation, hypotension across, hormonal responses, fetus (lamb), R67
GHRF: see Growth hormone-releasing hormone
Gizzard, motility, denervation effects (turkey), G1
Glomerular epithelial cells
 growth inhibition, heparin and, F781
 heparin sulfate proteoglycan protein content, puromycin aminonucleoside effects, F590
Glomerulosa cells, angiotensin II, cytosolic calcium elevation and, E338
Glomerulosclerosis, diabetes and protein intake effects, nucleotide synthesis, F647
Glucagon
 β -adrenergic mechanisms and, insulin action, E33
 glucose intolerance and, thyrotoxicosis, E843
 hepatic fructose 2,6-bisphosphate and, treadmill exercise, R38
 hepatocyte response to (sheep), R539
 hyperglycemia, CNS-mediated, E920
 insulin secretion stimulated by, ANF effects, E579
 intestinal hyperemia and, diabetes mellitus, G542
 production, metabolic feedback regulation of, R400
 secretion, nonadrenergic sympathetic neural influences, E785
Glucocorticoids
 angiotensinogen synthesis and, hepatocytes, E70
 bone formation inhibition, skeletal unloading and, E875
 cation transport induced by, spironolactone effects, colon, F1235
 feedback
 corticotrope, E241
 inhibition of ACTH, R344
 glutamine synthetase expression and, skeletal muscle, E397
 hypertension reversal and, one-kidney, one-clip hypertension, H717
Glucokinase, pancreatic islet discrimination of, computer simulation, E189, E201
Glucuronate
 hypotonic volume regulation and, proximal straight tubules, F853
 intracellular pH and, skin (frog), F126
Gluconeogenesis
 alanine effects, renal metabolism, R42
 hepatic, treadmill running and, R38
 liver (hummingbird), R699
 parathyroid hormone effects, renal proximal tubular segments, F847
 precursors to glycogen, fetus (sheep), E743
Glucoregulation
 exercise, epinephrine role in, E428
 hyperglycemia, CNS-mediated, E920
Glucose
 adrenalectomy, brown fat metabolism and, E597

Glucose (*continued*)

energy balance and, adrenalectomized obese mice, R141
enhancement of calcium transport, intestine, G339
exercise at reduced blood flow, limb muscle, H1156
hyperglycemia, maternal, fetal renal function and (sheep), F11
inhibition of insulin, diazoxide effects, E422
insulin secretion stimulated by, ANF effects, E579
intercellular level, subcutaneous tissue, microdialysis of, E218
intolerance
 acidosis-induced, adrenergic blockade effects, E812
 thyrotoxicosis, E843
kinetics
 carbohydrate feeding and, E236
 isotope infusion effects, euglycemic clamp, E871
 somatostatin and glucose infusion effects, fetus (sheep), E87
 lactate production from, adipocytes, regional differences, E716
 metabolic control of feeding, R82
metabolism
 endotoxin-induced, adrenergic blockade effects, E629
 insulin effects, E806
 insulin-stimulated, carnitine interaction with, E946
 muscle, physical inactivity and, E456
 oxidative and nonoxidative, thyroid hormone effects, E146
 sensitivity to insulin, circadian rhythm and, muscle, E41
 stimulation by insulin, E953
 triacylglycerol secretion and, liver, E306
muscle, euglycemic hyperinsulinemia, E942
pancreatic islet discrimination of, computer simulation, E189
penetration, cerebrospinal fluid, R200
plasma, prolonged hypothermia and, R1035
precursors, fetus (sheep), E743
production
 β -adrenergic mechanisms, E33
 metabolic feedback regulation of, R400
 regulation of CRF secretion, E287
 renal hemodynamics and, F444
 specificity, cellular ATP and, nephron, F977
starvation, trehalase expression after, kidney cells (pig), C816
sympathetic activity, hypothalamic lesions, R507
taste transduction, tongue, R117
tolerance, epinephrine infusion effects, E668
transport
 hormone-stimulated, phenylarsine oxide and denervation effects, E159
 muscle insulin resistance and, obesity, E374
 renal, humor hypercalcemia of malignancy and, F1078
 soleus axon function and, insulin effects, C60
uptake
 non-insulin- and insulin-mediated, tissue sites, E769

prolonged insulin stimulation and, muscle, E621
D-Glucose, sodium-dependent transport, proximal small intestine resection, G292
Glucose 1,6-bisphosphate
 after isometric contraction, skeletal muscle, C145
 during circulatory occlusion, skeletal muscle, C140
L-Glutamate, parabrachial stimulation, pressor response and, H1349
Glutamine
 ammoniogenesis and, renal proximal tubular segments, F847
 concentration, protein synthesis relations, skeletal muscle, E166
 physiological hypercortisolemia effects, E366
 specificity, cellular ATP and, nephron, F977
Glutamine synthetase, expression, dexamethasone effects, skeletal muscle, E397
Glutaric acid, *p*-aminohippurate transport and, renal basolateral membrane vesicles, F597
Glutathione
 altered content, renal ischemic injury and, F911
 efflux
 hepatic, membrane potential difference in, G547
 membrane potential and cellular ATP effects, hepatocytes, G403
 exogenous oxidant injury and, proximal tubules, F874
 metabolism, α -adrenergic modulation of, hepatocytes, E801
 transport, liver plasma membrane vesicles, G253
Glutathione disulfide, oxidative injury, renal proximal tubules, C28
Glyceraldehyde-3-phosphate dehydrogenase, kinetics, renal epithelial cell growth, F868
Glycerination, smooth muscle, myosin phosphorylation and, C34
Glycerol
 microdialysis, adipose tissue and blood, E737
 renal failure induced by, hydroxyl radical role in, F438
 α -Glycerolphosphate dehydrogenase, tibialis anterior motor units, C43
Glycerophosphorylcholine
 accumulation, during dehydration, renal inner medulla, F626
 survey, renal cell lines, C181
Glycogen
 blood flow during exercise, muscle, H1509
 depletion
 soleus motor units, C684
 tibialis anterior motor units, C43
 metabolic changes, track sprint running (greyhound), R513
 precursors, fetus (sheep), E743
 storage, during insulin stimulation, muscle, E621
 synthesis, sensitivity to insulin, circadian rhythm and, muscle, E41
Glycogenolysis
 hepatic, treadmill running and, R38
 production, metabolic feedback regulation of, R400

Glycogen phosphorylase, hormone effects, hepatocytes (sheep), R539
Glycogen synthase, insulin resistance, muscle, obesity and, E374
Glycolysis
 during circulatory occlusion, skeletal muscle, C140
 organ-specific control, anoxia and (turtle), R774
Glycolytic enzymes, subcellular binding, muscle (fish), R289
Glycoprotein IIIa, granulocyte elastase interaction, platelets, H651
Glycosaminoglycans, epithelial cell growth inhibition, glomerular visceral, F781
Glycosylation, hepatic clearance, renal renin, E642
Glycylsarcosine, active transport, proximal straight tubules, F177
GnRH: *see* Gonadotropin-releasing hormone
Gold thioglucose, sympathetic activity, hypothalamic lesions, R507
Gonadotropin
 human chorionic, testes lipid composition and, E442
 oocyte meiosis and (goldfish), R268
Gonadotropin-releasing hormone
 calcium and sodium effects on LH release, pituitary (calf), E469
 hypothalamic, alterations over normal menstrual cycle, E696
 LH release induced by, calmodulin antagonist effects (calf), E59
 oocyte meiosis and (goldfish), R268
 sensitivity, starvation and, prepubertal females, E482
G protein, PI hydrolysis and, pancreatic acinar cells, E652
G_i protein, changes in expression, cultured heart cells, C51
Granules, swelling, exocytosis and, F1
Granulocytes, xanthine oxidase and, ischemia-reperfusion injury, H1269
Granulocyte elastase, platelet interactions, H651
Growth: *see also* Development; Maturation
 androgenic influences, adult (monkey), E857
 cardiac muscle cells, carbon monoxide effects, C291
 compensatory
 lung, perioperative hypoxemia and, E65
 ornithine decarboxylase activity and, renal, F270
 gastric mucosal, gastrin effects, G305
 glomerular, nucleotide metabolism, F635
 inhibition, crystal absorption and, F1197
 mirex-induced adaptive, liver, hepatocytes and, G132
 neurotensin stimulation, small intestine, G813
 obesity and, acceleration by group housing, R128
 regulation
 kidney, insulin-like growth factor I receptors, E504
 PDGF-like protein secretion (monkey), F800
 protein degradation, cardiac fibroblasts, C202
 sex steroid effects, bone density, E416
 somatic, food restriction effects, adrenalectomy and, R787

- tracheal epithelial cells, hormone effects, C237
- Growth factors
hormone effects, tracheal epithelial cells, C237
- mesangial cells, F674
- Growth hormone
amino acid level and, renal hemodynamics, F444
- binding proteins for, kidney cytosol, E293
- muscle hypertrophy stimulated by, IGF-I and -II gene expression, E513
- status, white adipose tissue development and, E280
- stimulation, 3-O-methylglucose transport, E723
- Growth hormone cell, calcium channels, hormone release and, E137
- Growth hormone-releasing factor, sleep enhancement, R310
- Growth hormone-releasing hormone, biphasic stimulation, SRIF secretion, hypothalamic cells, E829
- GTP γ S, loading, endothelial cells, phospholipase C and, C667
- Guanidine, transport, intestinal brush-border membrane vesicles, G85
- Guanosine diphosphate
binding, brown fat, E865
- trophic changes in brown fat, cold acclimation, R874
- Guanosine monophosphate, cyclic
ANF vasodilatory action and, glomerular afferent arterioles, F415
- blunted response to ANF, spontaneous hypertension, vascular smooth muscle cells, C573
- hydraulic conductivity and, cortical collecting tubules, F841
- mediator of inhibition, renin release, F474
- signalling mechanism, *E. coli* enterotoxin, kidney (opossum), F1040
- sodium chloride permeability and, inner medullary collecting duct, F421
- spontaneous hypertension, vascular smooth muscle cells, C169
- urinary, biological marker of renal activity of ANF, F1220
- vasopressin-induced calcium mobilization, glomerular mesangial cells, F771
- Guanylate cyclase
hydraulic conductivity and, cortical collecting tubules, F841
- internal anal sphincter relaxation, G571
- Guar, colonic transit time and, radiographic analysis, G633
- Gustatory response
behavioral response, sodium chloride, R424
- sodium chloride, after amiloride, R1002
- Gut: see Intestine

H

- Haber-Weiss reaction, xanthine oxidase and granulocytes, ischemia-reperfusion injury, H1269
- Heart
adrenalectomy effects, brown fat metabolism, glucose feeding and, E597
- adult vs. immature, metabolic hyperemia (guinea pig), H1460

- arrested, changes in coronary pressure-flow relations, H476
- baroreflex properties, differentiation, R654
- cardiac channels, lipid bilayers, guanine nucleotide-binding proteins, H722
- catheterization, responses to mental stress, H1443
- contractile function, responses to ruthenium red (frog), H1413
- contractile tissue, differential sympathetic regulation, H1050
- denervation
carotid stimulation, coronary dilation and, H1330
- differential sympathetic regulation, H1050
- direct effects of vasopressin, H261
- dorsal medulla, pressor responses, R709
- endothelial lipoprotein lipase, metabolic fate of, E247
- endotoxemia effects, metabolism and coronary flow, H1295
- energetics, oxygen consumption-pressure volume area relations, H366
- energy-depleted normoxic, sustained function, C192
- failure, L-thyroxine treatment, H801
- fatty acyl-coenzyme A oxidase, properties and subcellular localization, H441
- hypertrophy: see Hypertrophy
- innervation, cardiac output measurement with Doppler flow probes, H1206
- intracellular pH, inorganic phosphate content and, H189
- isolation of translation-inhibiting peptides, H1024
- left ventricular filling, hypoxia and reoxygenation effects, H1311
- mapping
unsuccessful defibrillation shocks and, H902
- ventricular arrhythmias and, H891
- mass increase, evaluation, H587
- mechanical recovery during reflow, L-propionylcarnitine effects (swine), H169
- mitochondria, chronic hypobaric hypoxia, C123
- myosin heavy chains, separation, H659
- norepinephrine turnover, genetic hypertension, H736
- plexus neurons, activity, H789
- potassium-chloride arrested, oxygen consumption in, H807
- protein synthesis, acute inhibition, β -adrenergic stimulation or hypoxia, E537
- Purkinje fibers, contractility, sodium-calcium exchange in, C278
- respiration, activation of dehydrogenase activity and, H185
- sarcolemmal sodium-calcium exchange, oocytes (toad), C870
- selective denervation, response to coronary occlusion, awake state, H525
- tissue, ANF gene expression, perinatal, E388
- ventricular cells, fast inward current, embryo (chick), H540
- ventrolateral medulla, pressor responses, R709
- VIP receptors, desensitization, H601

- volume-overloaded, estimation of left ventricular wall volume in, H1399
- Heart atria
activation, baroreflex modulation of heart rate and, H503
- ANP secretion, methacholine inhibition of, H1429
- cells, lidocaine exposure, recovery kinetics (frog), H1558
- distension
natriuresis during, plasma atriopeptin and, R259
- release of ANF and, isolated heart, R232
- low potassium, reentrant and focal arrhythmias in, H1359
- ouabain uptake, endocytosis (guinea pig), C479
- rate, differential sympathetic regulation, H1050
- resection, saline loading in, awake state, H144
- right, pulmonary artery flow and (pig), H228
- vasoconstrictor peptide endothelin, inotropic action of (guinea pig), H970
- Heart cells: see also Cardiomyocytes; Myocytes; Ventricular cells
- contractile force, ventricle muscle strip comparison (frog), H111
- functional G $_i$ protein, changes in expression, C51
- inside-out patch-clamp recording, H980
- primary culture, attachment and maintenance, C19
- single gap junctional channels, neonate, H770
- Heart rate
area postrema stimulation and, R855
- arginine vasopressin and, during dehydration, awake state, R46
- arterial pressure control, after carotid sinus denervation, H910
- awake state, CRF and angiotensin II effects, E46
- baroreflex modulation, atrial activation and, H503
- control
brain stem somata, R703
- diabetes, E636
- neuropeptide effects, H311
- physiological changes, during urethane anesthesia, R73
- plasma ACTH concentration, vasopressin infusion effects, awake state, R665
- responses, maturation of, fetus (lamb), R794
- right atrial contraction, pulmonary artery flow and (pig), H228
- venous volume and tone changes, forearm, H947
- Heart ventricles
arrhythmias, induction, shock strength and timing effects, H891
- defibrillation, unsuccessful, epicardial activation after, H902
- ejection fraction, linear transformation and ellipsoid models, H197
- electrophysiology, time course of sympathetic denervation supersensitivity, H577
- function, after acute ischemic injury, H85
- muscle strips, comparison with heart cell contractile force (frog), H111

- Heart ventricles (*continued*)
 optimal external power or efficiency, H1263
 pericardial pressure, regional variation, H1370
 postischemic recovery, amiloride effects, H608
 refractoriness, hysteresis in, H1342
 size, evaluation, H587
- Heart ventricles, left
 augmented function, early hypertension, awake state, H1525
 denervation, asynchrony with, awake state, H358
 end-systolic pressure-volume, pressure-wall thickness relations, model, H679
 filling, hypoxia and reoxygenation effects, H1311
 function, pulmonary artery flow and (pig), H228
 hypertrophy, volume-overloaded heart, H1399
 rate of relaxation, separation from chamber stiffness, H1468
 systolic wall, pressure-thickness isochrones, H1136
 volume measurement, balloon method, H394
- Heart ventricles, right
 hypertrophy, pulmonary hypertension and, H1165
 protein synthesis, efficiency in pressure overload cardiac hypertrophy, H325
- Heat
 oscillating flow, pinna, R464
 production
 isometric contraction, anococcygeus muscle, C536
 lateral hypothalamic lesions, E708
- Heating, contralateral hand, forearm oxygen consumption and, E572
- Hematocrit
 blood sample-transfusion protocol evaluation, R851
 vasopressin, drinking and, during dehydration (pig), R249
- Hemin, aerobic capacity and, skeletal myotubes, C519
- Hemoglobin
 bioassay of endothelium-derived relaxing factor, H1259
 oxygen content, blood, H1545
 renal failure induced by, F539
- Hemorrhage
 blood sample-transfusion protocol evaluation, R851
 constriction of lymphatics, H514
 hypovolemic, hyperosmotic resuscitation of, fluid redistribution, H629
 mesenteric blood flow, local control by renin-angiotensin system, G267
 severe, serotonergic mechanisms during, H496
 vasopressin and Met-Enk releases and, blood and CSF, R731
 vasopressin blockade after, awake state, H1325
- Henle's loop
 amino acid transport, juxtamedullary nephrons, F397
 ammonium absorption, potassium effects, F78
 chloride reabsorption, insulin effects, F1206
 medullary collecting tubules and, cAMP production, calmodulin dependence of, F834
- structure, countercurrent multiplier system (bird), F500
 thick ascending limb innervation, F340
 protein kinase, ADH effects, F292
 renal arachidonic acid metabolism, hypertension and, F151
- Heparin
 epithelial cell growth inhibition, glomerular visceral, F781
 metabolic fate of lipoprotein lipase and, heart, E247
- Heparin sulfate proteoglycan, puromycin aminonucleoside effects, glomerular epithelial cells, F590
- Hepatic artery, hemodynamics, continuous monitoring, G194
- Hepatic nerve, unequal bulbospinal influences on, R946
- Hepatocytes
 angiotensinogen mRNA accumulation, regulation of, E70
 autoradiographic analysis, adaptive liver growth, G132
 ATP-depleted, cell death in, extracellular acidosis effects, C315
 cotransport, taurocholate and bilirubin glucuronides, G121
 DIDS excretion, bicarbonate effects, G713
 fluorescent angiotensin II probe, development, C452
 glucagon and catecholamine effects (sheep), R539
 glutathione flux from, membrane potential and cellular ATP effects, G403
 glutathione metabolism, α -adrenergic modulation of, E801
 inactivation of amino acid transport, PCMBs, C340
 sialic acid effects, diabetes mellitus, E173
 sodium-proton exchanger in, G346
 SV40-transformed, growth-dependent regulation of system A in, C261
 tight junctional permeability, hormonal regulation of, G454
- Hepatoma cells, inactivation of amino acid transport, PCMBs, C340
- Heptanol, electrical coupling and, colonic smooth muscle, C653
- HETE: *see* Monohydroxyeicosatetraenoic acid
- Hexamethonium, mean arterial blood pressure and, awake state, H483
- N,N'*-Hexamethylene-bis-acetamide, trehalase expression after, proximal tubule cells (pig), C816
- Hexokinase, muscle, obesity and, E374
- Hexose
 transport
 stimulation, growth hormone, E723
 transcellular, glucose enhancement of, intestine, G339
- Hibernation
 entrance to, paratrigenal nucleus during (squirrel), R178
 neuronal activity during (squirrel), R1008
- Hindbrain, low-dose bombesin, food intake and, R988
- Histamine
 pulmonary artery responses, C3a, H1227
 receptors: *see* Receptors
 stimulation of PGs and HETE synthesis, endothelial cells, C214
- Histidine, vasopressin action and, urinary bladder (toad), F685
- Homocysteine, methionine cycle, quantitative study, E322
- Hormonal regulation, tight junctional permeability, hepatocyte, G454
- Hormonal responses
 hypotension, mature and immature fetus (lamb), R67
 hypoxia, awake state (sheep), R274
 recombinant human tumor necrosis factor, E206
- Hormones: *see also* specific hormone
 growth and function, tracheal epithelial cells, C237
 levels, renal hemodynamics and, F444
 pulsatile secretion, computer simulation, E775
 release, episodic endocrine gland, model, E749
- Horse radish peroxidase, biliary permeability, hormonal regulation of, G454
- Humoral factors, arterial pressure, awake state, R693
- Hydralazine, vasodilatory therapy effects, pulmonary hypertension, model, H1232
- Hydration
 phosphate metabolites and, renal, NMR studies of, F581
 polycythemia and, exercise-heat stress, R456
- Hydrochloric acid, secretion, valinomycin and, gastric glands, G313
- Hydrochlorothiazide
 sodium-chloride absorption and, proximal tubule, F461
 sodium-chloride transport and, urinary bladder (flounder), F229
- Hydrocortisone
 impaired thyroid hormone transport, obesity and, E54
 secretion, numerical deconvolution (horse), E688
- Hydrogen
 calcium uptake dependent on, parotid gland, G429
 chloride-dependent ATP-driven transport, renal cortical endosomes, F885
 clearance, adenosine and cerebral autoregulation, H1211
 homeostasis, during sodium chloride and water intake, R97
 transport
 jejunal brush-border membrane vesicles, G206
 papillary collecting duct cells, F331
- Hydrogen ions
 cotransport, renal brush-border membrane vesicles, C822
 excretion, norepinephrine and, intestine, G18
- Hydrogen peroxide
 endothelium-dependent relaxation and, diabetic aorta, H825
 granulocytes and, ischemia-reperfusion injury, H1269
 papillary muscle tension and, H138
- Hydrogen-TEA exchange, choline effects, TEA transport, renal tubules (snake), F167
- Hydrolase, DHEA treatment and, obesity, E1
- Hydronephrosis, relief of, renin-angiotensin system response, neonate (guinea pig), F1070
- 3-Hydroxybutyrate
 intracerebroventricular infusions, dietary obesity model, R974
 transport, brain cells, C133

- β -Hydroxybutyrate, specificity, cellular ATP and, nephron, F977
- Hydrocortisone, sodium transport and, A6 cells, F736
- 6-Hydroxydopamine stimulation of CRH secretion, E463
- vasodepression induced by ANF and, central nervous system, H616
- 12-Hydroxy-heptadecatrienoic acid, histamine stimulation of, endothelial cells, C214
- Hydroxyl radical glycerol-induced acute renal failure and, F438
- granulocytes and, ischemia-reperfusion injury, H1269
- 5-Hydroxytryptamine: *see* Serotonin
- Hypercalcemia humor, of malignancy, renal phosphate transport in, F1078
- ouabain and, ANP release, E437
- parathyroid effects, exchangeable calcium and blood flow, bone, H94
- Hypercapnia neurohypophysis and hypothalamus, blood flow, R295
- respiration during, carotid sympathectomy and deafferentation, R252
- Hypercarbia, acidification adaptation, inner medullary collecting duct, F1155
- Hypercholesterolemia, thromboxane antagonism effects, H318
- Hypercortisolemia, physiological, amino acid kinetics, E366
- Hyperemia blood flow during exercise, muscle, H1509
- exercise, blood flow relations, muscle, H1004
- functional, red cell velocity during (hamster), H236
- intestinal, glucagon role in, diabetes mellitus, G542
- jejunal, food-induced, adenosine effects, G168
- metabolic, heart (guinea pig), H1460
- postprandial, awake state, G522
- reactive adenosine-induced coronary vasodilation, H250
- sympathetic tone and vascular resistance, H937
- Hyperglycemia CNS-mediated, nervous system and hormone contributions, E920
- 2-deoxy-D-glucose, autonomic nervous system in, E928
- maternal, fetal renal function and (sheep), F11
- Hyperinsulinemia, euglycemic, muscle glucose during, E942
- Hyperosmotic resuscitation, fluid redistribution in, H629
- Hyperplasia pancreatic growth, after partial resection, G670
- renal, ornithine decarboxylase activity and, F270
- Hyperpolarization endothelium-dependent, arterial smooth muscle, H207
- increased free calcium and, acetylcholine-stimulated endothelial cells, H965
- Hypersensitivity antigen-induced contraction, jejunal smooth muscle, G701
- immediate, motility and anaphylaxis, intestinal, G505
- Hypertaurinuria, decreased taurine transport, renal basolateral membrane, F88
- Hypertension angiotensin II activity, pituitary cell aggregates, R407
- arachidonic acid metabolism and, renal, F151
- ATP-sensitive potassium channels, hypertrophied ventricular myocytes, H1254
- body fluid volume, age-related changes, F953
- borderline, stress responses, R431
- DOCA-salt angiotensin II receptors, brain nuclei, H646
- renal hemodynamics and vascular reactivity in, R563
- early, cardiac function in, awake state, H1525
- essential, ANP role in saline loading, F1085
- genetic norepinephrine turnover, H729, H736
- ventricular size and, H587
- glomerular, renal ablation in nephrosis, F1243
- naloxone attenuation of, E839
- NE-ACTH, control of sodium excretion in, R894
- norepinephrine in, response of large artery diameter, H36
- one-kidney, one-clip, dexamethasone reversal of, H717
- opiates, modulation of baroreflexes, H987
- pial arteriolar responses to, trigeminalectomy effects, H1
- portal, new method of portal vein cannulation, G191
- pressure natriuresis in, renal interstitial hydrostatic pressure during, R756
- pulmonary monocrotaline, endothelial injury in, H1484
- monocrotaline pyrrole-induced, platelets and, H1165
- vasodilatory therapy effects, models, H1232
- renal hyperresponsiveness of arterial rings and, H272
- microvascular perfusion, hypertrophied myocardium, H1384
- vascular vasopressin receptors, H693
- renovascular, antihypertensive effects of potassium depletion, H1181
- spontaneous ANF-induced vasodepression, CNS, H616
- cGMP response to ANF, vascular smooth muscle cells, C573
- cold-enhanced pressor response, H1018
- reduced sodium-potassium-chloride cotransport, hypertension and, C169
- Hypertrophy cardiac pressure overload, protein synthesis in, H325
- sympathetic activity in, H452
- isolation of translation-inhibiting peptide, myocardium, H1024
- myocardial, iron deficiency, temperature effects, R90
- renal, glomerular effects of diabetes and protein intake, F647
- Hyperventilation, acidification, inner medullary collecting duct, F307
- Hypervolemia, renal response to, awake state (monkey), R388
- Hypocalcemia, parathyroid effects, exchangeable calcium and blood flow, bone, H94
- Hypocapnia, hormonal and electrolyte responses to, awake state (sheep), R274
- Hypocarbica, acidification adaptation, inner medullary collecting duct, F1155
- Hypoglycemia, deep, glucoreceptors and, carotid perfused tissue, E680
- Hypokalemia, reentrant and focal arrhythmias, atrium, H1359
- Hypoparathyroidism, 1,25-dihydroxyvitamin D synthesis in, E730
- Hypoperfusion, pulmonary vasoregulation after, pentobarbital anesthesia modification of, H569
- Hypophysectomy ANF release in, R534
- ornithine decarboxylase activity and, kidney, F270
- Hypotension ACTH and renin, fetal, maternal cortisol effects (sheep), R412
- autoregulation of cardiac output, awake state, H44
- hemorrhagic, cerebral blood flow and adenosine during, H1211
- hormonal response to, mature and immature fetus (lamb), R67
- lower-body negative pressure, vagal activity during, R149
- serotonergic mechanisms, during hemorrhage, H496
- spinal cord blood flow, ^{14}C -butanol measurement of, H953
- Hypothalamic cells, SRIF secretion, biphasic stimulation by GHRF, E829
- Hypothalamic factor, regulation of sodium pump, renal cells, F574
- Hypothalamus anterior and posteroventral nucleus, norepinephrine turnover in genetic hypertension, H729
- circadian variation in response, CRF-41 and AVP, E265
- CRF secretion, regulation by glucose, E287
- deep hypoglycemia, glucoreceptors in carotid perfused tissue, E680
- endogenous sodium-potassium-ATPase inhibitor from, regulation of sodium pump, renal cells, F574
- hypercapnia, blood flow during, R295
- hyperglycemia, CNS-mediated, E920
- lateral, sympathetic firing rate and, R507
- lesions electrolytic and chemical, LH pulses and, E583
- lateral, thermogenesis after, E708
- paraventricular nucleus, lesion effects on drinking and pressor responses to angiotensin II, R882
- ventromedial, adrenoceptor blockade during exercise, R547
- Hypothermia MSH and interleukin interactions and, R914
- prolonged, insulin and substrate effects, R1035

- Hypothyroidism
ANF during, volume expansion and, R61
sodium-potassium transport, thyroid hormone effects, E604
- Hypovolemia, renin and vasopressin release, ANP inhibition, R368
- Hypoxanthine, concentration, hypoxic and stagnant hypoxia (lamb), H53
- Hypoxemia
ANF secretion and, H295
perioperative, postpneumectomy lung growth and, E65
venomotor responses, H760
- Hypoxia
arterial, postnatal intestinal circulation and (swine), H1144
biogenic amines, pulmonary vascular reactivity to, H329
carbon monoxide, circulation during β -adrenergic blockade, H77
central and local, venomotor responses, H760
hormonal and electrolyte responses to, awake state (sheep), R274
hypobaric, liver and heart mitochondria, C123
hypoxic and stagnant, hypoxanthine and lactate concentrations (lamb), H53
inhibition of protein synthesis during, heart, E537
left ventricular relaxation, H1468
phosphoinositide metabolism, aorta, H1476
reoxygenation and, early left ventricular filling, H1311
stimulation of proliferation, endothelial cells, H554
- Hysteresis
atrioventricular propagation, H985
demonstration in refractoriness, ventricular myocardium, H1342

I

- Ibuprofen, organ blood flow and, during endotoxic shock (pig), H177
- IGF: *see* Insulin-like growth factor
- Ileal mucosa, D-glucose transport, sodium-dependent, small intestine, G292
- Ileum
ion transport, leukotrienes in, G175
lipid infusion, jejunal motor patterns and, G800
- Immunoglobulin E
intestinal anaphylaxis, proximal colon, G201
motility and anaphylaxis, intestinal, G505
- Immunoneutralization, somatostatin and neurotensin, gastric acid secretion and, G40
- Impedance
aortic input, Windkessel model, H742
characteristic, intramural lymphostasis and vascular mechanics, H1289
vascular, intramyocardial pressure and coronary flow, model, H664
- Indicator dilution technique, insulin uptake, renal cortical epithelium, E357
- Indium-111, neutrophil accumulation, myocardial reperfusion injury, H1188
- Indo-1, conversion, liver mitochondria, C304
- Indomethacin
ADH action and, bladder (toad), F74
characteristics, papillary collecting duct cells, F1160
ethanol vasoaction and, gastric submucosa, G731
interleukin 1- α -induced fever and, R527
pressor response to serotonin and, lung, H1096
pump perfusion, autoregulation and, H280
serotonin responsiveness and, coronary arteries, H1032
- Infant: *see also* Neonate; Newborn
development, maternal photoperiodic history and (vole), R831
- Infarction, myocardial, augmentation of contraction in nonischemic zone, H301
- Ingestion: *see* Feeding
- Inomycin, agonist-sensitive calcium pool, pancreatic acinar cells, G221, G229
- Inositol, survey, renal cell lines, C181
- Inositol lipids, turnover, gastric parietal cells, G99
- Inositol phosphate
cell cycle dependence, neuroblastoma cells, C531
vasopressin stimulation, LLC-PK₁ cells, C502
- Inositol phospholipid, hydrolysis, epithelial permeability, C781
- Inositol polyphosphates, PTH effects, osteoblast-like cell line, E660
- Inositol trisphosphate
adrenergic stimulation and, ANP release, E260
agonist-sensitive calcium pool, pancreatic acinar cells, G221, G229
caerulein effects, pancreatic acini, G33
cell cycle dependence, neuroblastoma cells, C531
formation, parotid gland, desensitization by substance P receptors, C149
- Inositol 1,4,5-trisphosphate, calcium pool, hydrogen-dependent calcium uptake, parotid gland, G429
- Insulin
action, β -adrenergic mechanisms and, E33
characteristics, papillary collecting duct cells, F1160
chloride reabsorption and, loop, F1206
deoxyglucose pharmacokinetics and, E806
dependent and independent fetus, glucose kinetics, somatostatin and glucose infusion effects (sheep), E87
epinephrine, exercise-induced increment, E428
glucose inhibition of, diazoxide effects, E422
glucose metabolism stimulated with, carnitine interaction and, E946
glucose-stimulated secretion, ANF effects, E579
glucose uptake mediated by, tissue sites, E769
hepatic fructose 2,6-bisphosphate and, treadmill exercise, R38
hyperglycemia, autonomic nervous system in, E928
inhibition of protein synthesis, heart, E537
intracerebroventricular infusions, dietary obesity model, R974
metabolism, endotoxin-induced, adrenergic blockade effects, E629
penetration, cerebrospinal fluid, R200
plasma, euglycemic hyperinsulinemia, E942
prolonged stimulation, glycogen storage during, muscle, E621
regional differences, adipocytes, E716
release, furosemide effects, β -cells, E591
renal hemodynamics and, F444
resistance
acidosis effects, E812
diabetes mellitus, sialic acid role in, E173
muscle, obesity and, E374
responsiveness, protein metabolism, bedrest, E548
second messenger for, C1
secretion
cAMP and, pancreatic islets, obesity, E833
nonadrenergic sympathetic neural influences, E785
substrate homeostasis and, prolonged hypothermia, R1035
sensitivity
epinephrine infusion and, E668
muscle, circadian rhythm and, E41
muscular glucose metabolism, resting and running, E456
sodium-potassium exchange, glucose metabolism and, E953
soleus axon function and, glucose transport, C60
stimulation of glucose transport, phenylarsine oxide and denervation effects, E159
sympathetic activity, hypothalamic lesions, R507
thyroid status, white adipose tissue development and, E280
transport, intracellular pathways, vascular endothelial cells (calf), C459
triacylglycerol secretion and, liver, E306
uptake, renal cortical epithelium, E357
- Insulin-like growth factor, stimulation of glucose transport, phenylarsine oxide and denervation effects, E159
- Insulin-like growth factor I
distinct receptors for, renal glomeruli and tubules, E504
gene expression, muscle, E513
stimulation of sodium transport, renal (toad), C413
- Insulinlike growth factor I, synthesis and release, mesangial cells, F1214
- Insulin-like growth factor II, calcium-permeable cation channel, BALB/c 3T3 cells, C442
- Interleukin, physiological changes, during urethane anesthesia, R73
- Interleukin 1
interactions with MSH, effects on sleep, behavior, and brain temperature, R914
tumor necrosis factor and, energy metabolism, E760
- Interleukin 1- α , febrile response to, indomethacin effects, R527
- Interlobular artery, carbon dioxide partial pressure, variations, renal cortex, F361
- Intestinal hormones, inositol lipid turnover and, gastric parietal cells, G99
- Intestinal mucosa, intramural distribution, blood flow, during sympathetic stimulation, H1091

Intestine

- absorption
 - arachidonic and linoleic acid, G612
 - folypolyglutamate, analysis of sequential events, G361
 - amino acid transporters and peptidases, regulatory signals for, G151
 - anaphylaxis, distal colon, G201
 - L-aspartate transport, low-affinity, C737
 - brush-border membrane, sodium-dependent L-proline transport (eel), R648
 - brush-border membrane vesicles, guanine transport, G85
 - carnosine transport, dietary regulation of, G143
 - chloride absorption, pH effects (flounder), G247
 - circulation: *see* Circulation
 - decreased secretion, aging and, G72
 - ion transport, leukotrienes in, G175
 - lipid absorption, microvascular exchange during, G690
 - motility: *see* Motility
 - myoelectric activity
 - intraluminal nutrient effects, G12
 - ketcyclazocine and, G566
 - necrotizing enterocolitis, inflammatory mediators and, G556
 - postgastric controls, feeding behavior, preweanlings, R191
 - satiety, capsaicin treatment and, R569
 - sodium-hydrogen and chloride-bicarbonate exchange, norepinephrine effects, G18
 - sodium:potassium-chloride cotransport, bumetanide effects (flounder), C246
 - succinate transport, sodium effects, C95
 - sugar transport, sodium-coupled (chicken), C486
 - transcellular calcium transport, glucose enhancement of, G339
- Intestine, small
- basolateral membrane vesicles, calcium transport by, G482
 - growth, neurotensin stimulation of, G813
 - protein digestion, neutral endopeptidases in, G212
 - proximal resection, sodium-dependent transport of dtd-glucose, G292
 - secretion release, G7
- Inulin, microinjection, acute renal failure, F257
- Iodine-131, circadian period and (hamster), R1
- Iodipamide, biliary secretion, lipid particles and, G745
- Ions
- absorption, sugar-stimulated, vertebrates and invertebrates, R583
 - concentration, subcutaneous interstitial fluid, F513
- Ionomycin, cytosolic free calcium regulation, proximal tubules, F787
- Iron
- deficiency, norepinephrine in, environmental temperature effects, R90
 - nephrotoxicity and, F539
 - transport, erythron, R326
- Ischemia
- cerebral, superoxide generation after, newborn, H401
 - coronary, augmentation of contraction in nonischemic zone, H301
 - glucose 1,6-bisphosphate during, skeletal muscle, C140

myocardial

- afferent autonomic reflexes and, H26
 - cellular compartmentation in, H929
 - electrical and mechanical arrest effects, H60
 - neutrophil accumulation and, H1060, H1188
 - regional dysfunction after, H85
 - sarcolemma in, freeze-fracture study, H467
 - selective cardiac denervation and, awake state, H525
 - subcellular electrolyte shifts during, H917
 - thromboxane antagonism effects, H318
- renal
- course and pathogenesis, F257
 - failure, oxidant injury in, F450
 - injury, altered glutathione content and, F911
 - reperfusion and cerebral artery response, H879
 - depolarization-induced automaticity, H992
 - reperfusion injury, kidney, neutrophils and, F728
- Islets of Langerhans
- diazoxide effects, glucose inhibition of insulin, E422
 - glucose-stimulated insulin secretion, ANF effects, E579
- Isochrones, pressure-thickness, left ventricular systolic wall, H1136
- Isoflurane, VIP effects and, vascular conductance, R968
- Isoform, sodium-potassium-ATPase, high-ouabain-affinity by thyroid hormone, E912
- Isonicotinamide, somatostatin release and, D-cells, G424
- Isoproterenol
- adrenergic stimulation and, ANP release, E260
 - arterial hypoxia and, effects on postnatal intestinal circulation (swine), H1144
 - calcium-activated potassium channels and, aortic smooth muscle cells, H754
 - dexamethasone effects, A6 epithelia, C661
 - heart rate control, diabetes, E636
 - inhibition of ANP secretion, H1429
 - inhibition of protein synthesis, heart, E537
 - inotropic response to, early sepsis, H699
 - maturation of responses, fetus (lamb), R794
 - ontogeny of anorexia, R908
 - VIP receptors and, desensitization, heart, H601
- Isotopes, infusion, glucose kinetics and, euglycemic clamp, E871

J

Jejunum

- absorption of folypolyglutamate, G361
- acid secretion, catecholamine-stimulated, α_2 receptors and, G640
- brush-border membrane vesicles, sodium and hydrogen transport, G206
- contraction, antigen-induced, G701
- hyperemia, food-induced, adenosine effects, G168

motor patterns, ileal lipid infusion effects, G800

Junction

- gap
 - cell uncoupling and protein kinase C, C699
 - electrical coupling, colonic smooth muscle, C653
 - lower esophageal sphincter, G441
 - oncogene expression and, C674
 - properties, heart cells, neonate, H770
- Juxtaglomerular apparatus
 - renin secretion, osmotic forces and, F1
 - tubuloglomerular feedback responses, adenosine analogue effects, F33

K

- Kainate, parabrachial stimulation, pressor response and, H1349
- Kainic acid, pressor responses, dorsal or ventrolateral medulla, R709
- Kaliuresis
 - low-dose ANP infusion and, anesthesia, R449
 - vasopressin effects, E449
- Kallikrein
 - abnormal vascular reactivity induced by, H397
 - angiotensin II and, papillary blood flow, F690
- Ketamine, VIP effects and, vascular conductance, R968
- Ketanserin, pump perfusion, autoregulation and, H280
- Keto acids, metabolism, regulation in kidney mitochondria, E475
- Ketcyclazocine, control of myoelectric activity and, intestine, G566
- Ketogenesis, flow rate and insulin effects, liver, E306
- α -Ketoglutaric acid, *p*-aminohippurate transport and, renal basolateral membrane vesicles, F597
- α -Ketoisocaproate, metabolism, regulation in kidney mitochondria, E475
- Ketone bodies
 - plasma, satiating effects of fat, diabetes, R123
 - transport, brain cells, C133
- Kidney
 - ablation
 - ANP-mediated solute excretion, F1091
 - nephrosis, single-nephron protein excretion after, F1243
 - activity of ANF, cGMP as biological marker of, F1220
 - adaptation
 - to metabolic acidosis, senescence and, F1183
 - to phosphate deprivation, pituitary involvement in, R373
 - allometry (lizard), R760
 - ammoniogenesis, purine nucleotide cycle effects, F1122
 - ANF
 - effects, dopamine receptors and, F494
 - metabolism, F466
 - basolateral membrane vesicles, *p*-aminohippurate transport by, F597
 - brush-border membrane, enzymatic and transport characteristics (snake), R52
 - brush-border membrane vesicles, dipeptide transport, C822

Kidney (*continued*)

calcium transport, calcium-binding protein role in, F558
 collecting duct
 adaptation to sodium delivery, F1256, F1269
 chloride transport, F220
 cortical and medullary thick ascending limbs, immunodissection of, F704
 cortical collecting duct, paracellular pathway in, F720
 cortical endosomes, chloride-dependent, ATP-driven hydrogen transport, F885
 distal tubules, passive properties (amphibian), F158
 dopamine receptors, identified by ¹²⁵I-Sch 23982, F970
 dose response and pharmacokinetics, ANF, R929
 epithelial membrane, sodium-sugar cotransport system, C745
 failure
 glycerol-induced, hydroxyl radical role in, F438
 hemoglobin- and myoglobin-induced, F539
 postischemic acute, F257
 postischemic acute, oxidant injury and, F450
 function
 angiotensin II modulation of ANP effects, F545
 ANH hormone effects, sodium depletion, R867
 ANP release and, vasopressin effects, E449
 developmental changes for phosphate reabsorption, F278
 fetus, maternal hyperglycemia effects (sheep), F11
 intrarenal renin inhibition and, F749
 physiological dose of ANP and, F907
 glomerular filtration rate and proteinuria, feeding and aging effects, awake state, F250
 hemodynamics
 amino acid and hormone level effects, F444
 kinin analogue antagonist, F408
 kinins and angiotensin II influence, F690
 NE-ACTH hypertension and, R894
 vascular reactivity and, DOCA-salt hypertension, R563
 hepatic clearance of renin, glycosylation for, E642
 interstitium, pressure natriuresis during hypertension, R756
 ischemia-reperfusion injury, neutrophil accentuation of, F728
 ischemic injury, altered glutathione content and, F911
 liver interrelations, acid-base balance, F807
 metabolic clearance, ANP, E934
 metabolism, alanine importance in, R42
 micropuncture
 amino acid transport, F397
 tubuloglomerular feedback during, F383
 mitochondria, valine and α -ketoisocaproate metabolism, E475
 norepinephrine turnover, genetic hypertension, H736

ornithine decarboxylase activity, compensatory growth and, F270
 phosphate metabolites, NMR studies of, F581
 phosphate transport, humor hypercalcemia of malignancy and, F1078
 plasma membrane, time course of thermal adaptation (trout), R622, R628
 potassium-depleted, protease effects on adenylate cyclase, F1033
 potassium regulation, aldosterone role in, F811
 preglomerular vessels, angiotensin II receptors, E16
 prehypertensive plasma, hyperresponsiveness of arterial rings and, H272
 pressure-dependent natriuresis, low concentrations of ANP and, F391
 renin granules, Triton WR-1339 in, E353
 renin secretion, osmotic forces; and, F1 response
 ANF secretion and, F936
 amino acid infusion, captopril effects, diabetic adults, F755
 intravenous endothelin, awake state, R1064
 low-dose ANP infusion, anesthesia, R449
 stress, borderline hypertension, R431
 vasopressin, tonic inhibition by pertussis toxin substrate, F1107
 volume expansion, awake state (monkey), R388
 sodium-hydrogen antiporter activity and, acidemia effects, F237
 sodium transport, stimulation by IGF1 (toad), C413
 thick ascending limb, active ammonium absorption, F57, F78
 thick limbs of Henle, diluting power, F1128, F1138, F1145
 tubuloglomerular feedback responses, adenosine analogue effects, F33
 Kidney cells
 collecting, fluorescent characterization of, F1003
 cortical collecting tubule, adenosine and intracellular calcium, C581
 epithelial
 growth, novel cytosolic protein kinetics during, F868
 lithium inhibition of adenylate cyclase, F995
 PDGF-like protein secretion (monkey), F800
 permeability, oxidants and, C781
 glomerular mesangial
 AVP-induced calcium fluxes, F142
 uracil RNA metabolism, C712
 inner medullary collecting duct
 ANP receptors in, F324
 sodium-hydrogen exchange activity, F331
 LLC-PK₁ clones, trehalase expression after glucose starvation (pig), C816
 papillary collecting duct, characteristics in culture, F1160
 papillary epithelial, crystal binding, F1025
 regulatory volume increase, sodium-hydrogen exchange and, separate control (opossum), C76
 sodium-inorganic phosphate cotransport, modulation by extracellular phosphate, C155

sodium-lactate cotransport, apical membranes, F1249
 sodium pump, regulation by hypothalamic factor, F574
 survey of osmolytes in, C181
 tubular, epidermal growth factor and, F1191
 volume regulation, without active transport, F529
 Kidney cortex
 carbon dioxide partial pressure, analysis of variations, F349, F361
 collecting duct, ADH and membranes (toad), F375
 epithelium, insulin uptake, E357
 renin secretory mechanisms, two pathways, F100
 thick ascending limbs, immunodissection of, F704
 Kidney glomerulus
 allometry (lizard), R760
 ANF metabolism in, F466
 ANF receptors, during rehydration, F621
 disease, transmembrane signaling and leukotriene receptors, C771
 growth factors, mesangial cells, F674
 insulin-like growth factor I, distinct receptors for, E504
 mesangial cells, pH regulation, C844, C857
 permeability, serum proteins (trout), R418
 phospholipase C activation in, prostaglandins and thromboxane A₂, F1059
 renin secretion, osmotic forces; and, F1
 uracil nucleotide synthesis, F635
 diabetes and protein effects, F647
 uracil ribonucleotide metabolism, cells, C712
 Kidney medulla
 ammonia recycling, potassium effects, F78
 blood flow: *see* Blood flow
 collecting duct
 hormone effects on sodium chloride permeability, F421
 immunocytochemical localization of band 3 protein, F115
 dehydration, accumulation of major organic osmolytes in, F626
 inner collecting duct
 acidification adaptation along, F1155
 apical membrane, cation channel, F278
 suppression of acidification, F307
 kinin and angiotensin II effects, papillary blood flow, F690
 loop of Henle, structure (bird), F500
 sodium influx, bumetanide-sensitive, F1138
 solute concentration, ureteral excision effects, F1225
 thick ascending limb
 benzodiazepine effects, C385
 hypotonic cell volume regulation, F962
 thick ascending limbs, immunodissection of, F704
 Kidney papilla
 amino acid transport, juxtamedullary nephrons, F397
 collecting duct, atrial natriuretic peptide action in, F313
 collecting duct cells, characteristics in culture, F1160

- collecting tubule, calcium oxalate adherence to cells, F1025
 - inner medullary collecting duct, sodium chloride permeability, hormone effects, F421
 - purified epithelial sodium channel, antibodies against, C835
 - Kidney pelvis, urea flux, F244
 - Kidney tubules
 - atrial natriuretic peptide action in, F313
 - backleak, acute renal failure, F257
 - capacity, developmental changes for phosphate reabsorption, F287
 - cells, epidermal growth factor and, F1191
 - cortical collecting
 - adenosine and intracellular calcium, C581
 - AVP-dependent cAMP levels, PGE₂ and α -adrenergic agonist effects, F43
 - chloride transport, F220
 - dopamine inhibition of sodium-potassium-ATPase activity, F666
 - fluorescent vasopressin analogue and, C622
 - hydraulic conductivity, cGMP effects, F841
 - paracellular pathway characteristics, F720
 - potassium transport, increased peritubular potassium effects, F108
 - protease effects on adenylate cyclase, F1033
 - regulatory cell volume decrease, C612
 - respiratory acidosis effects on bicarbonate transport, F656
 - response to vasopressin, pertussis toxin substrate effects, F1107
 - sodium-potassium-ATPase-dependent sodium flux, F605
 - distal
 - adaptation to sodium delivery, F1256, F1269
 - passive properties (amphibian), F158
 - whole-cell potassium current (frog), F699
 - everted, apical membrane function (salamander), F1276
 - innervation, limb of Henle, F340
 - insulin-like growth factor I, distinct receptors for, E504
 - medullary, ADH effects, cAMP-binding protein, F292
 - medullary collecting, cAMP production, calmodulin dependence of, F834
 - phosphaturic action, foscarnet, F984
 - proximal
 - ammoniogenesis, PTH effects, F847
 - ammoniogenesis, purine nucleotide cycle effects, F1122
 - ammonia loss from, F861
 - cytosolic free calcium, bradykinin effects, F486
 - differentiation of sodium-potassium pump, F552
 - exogenous oxidant injury, glutathione protection, F874
 - intrarenal volume expansion, sodium reabsorption effects, F1178
 - necrosis, microsomal protein synthesis inhibition, F265
 - organic cation transport, potential driven (flounder), R492
 - oxygen consumption, benzodiazepine effects, C385
 - regulation of cytosolic free calcium, F787
 - respiration, membrane potential, and potassium, succinate effects, F1170
 - routes of water flow (salamander), F188
 - sodium-chloride absorption, sodium-hydrogen antiporter role in, F461
 - t*-butyl hydroperoxide-induced toxicity, C28
 - volume regulation without active transport, F529
 - proximal convoluted
 - ANF metabolism in, F466
 - citrate reabsorption, pH effects, F301
 - protein metabolism, F520
 - proximal straight
 - active dipeptide transport in, F177
 - anions in hypotonic volume regulation, F853
 - intracellular chloride activity, F49
 - phosphate deprivation, cAMP analogue infusion effects, F96
 - TEA transport, choline effects (snake), F167
 - Kinin analogue antagonist, renal hemodynamics and, F408
 - Kinins
 - abnormal vascular reactivity induced by, H397
 - angiotensin II and, regulation of papillary blood flow, F690
 - thyroidectomy and, E411
- L**
- L364,718, action, gastric emptying and, G685
 - Lacrimal gland, chloride-bicarbonate antiporter, G367
 - Lactate
 - after isometric contraction, skeletal muscle, C145
 - brain and CSF composition, long-term anoxia effects, diving (turtle), R338
 - concentration, hypoxic and stagnant hypoxia (lamb), H53
 - epinephrine, exercise-induced increment, E428
 - exercise at reduced blood flow, limb muscle, H1156
 - ontogeny of anorexia, R908
 - precursors, fetus (sheep), E743
 - production, from glucose, adipocytes, E716
 - specificity, cellular ATP and, nephron, F977
 - Lactation: *see also* Fetus; Placenta; Pregnancy
 - pregnancy and, effects on sodium appetite, R1020
 - Laminin, cultured heart cells, attachment and maintenance, C19
 - Laminitis, epidermal growth factor, vascular smooth muscle cells (horse), C447
 - Length-tension relations, regional differences, colon, G787
 - Lens epithelium, sodium-hydrogen exchange activity, cellular pH and (toad), C595
 - Leucine
 - extraction effects, protein kinetics, R303
 - kinetics, time course of cortisol action, E366
 - metabolism, insulin responsiveness of, bedrest, E548
 - Leukocytes, polymorphonuclear, myocardial reperfusion injury, H1188
 - Leukotrienes
 - ethanol vasoaction and, gastric submucosa, G731
 - sulfinadopeptide, ileal ion transport and, G175
 - Leukotriene C₄
 - electromechanical activity and calcium uptake with, taenia coli (guinea pig), C433
 - synergistic effects, coronary flow and myocardial function, H153
 - Leukotriene D₄, receptors: *see* Receptors
 - LH: *see* Luteinizing hormone
 - Lidocaine, sodium and, recovery kinetics (frog), H1558
 - Light-dark cycle, non-REM sleep, EEG analysis, R27
 - Linear regression, multiple, vs. traditional analyses of variance, R353
 - Linoleic acid, orally fed, absorption and metabolism, G612
 - Lipase, inactivation, proteases and, G476
 - Lipids
 - absorption, microvascular exchange during, intestinal, G690
 - biosynthesis, prolactin effects, mammary gland explants, E567
 - composition, hormone effects, testes, E442
 - ileal infusion, jejunal motor patterns and, G800
 - metabolic control of feeding, R82
 - metabolism
 - liver microsomes (trout), R923
 - thyroid hormones and, E146
 - particles, biliary secretion of organic anions and, G745
 - peroxidation
 - exercise intensity and, skeletal muscle, C874
 - glutathione protection, renal proximal tubules, F874
 - glycerol-induced renal failure, F438
 - postischemic acute renal failure, F450
 - renal proximal tubules, C28
 - plasma, regulation of transfer by high-density lipoproteins, E894
 - plasma membrane, order in MDCK cells, F22
 - pyloric motility and, G490
 - Lipogenesis
 - flow rate and insulin effects, liver, E306
 - insulin-sensitive, diabetes mellitus, E173
 - Lipolysis studies, adipose tissue, microanalysis in, E737
 - Lipophilic anions, glutathione efflux and, hepatocytes, G403
 - Lipoprotein
 - amniotic fluid, cholesterol metabolism, aorta, fetus, H160
 - high-density
 - plasma lipid transfer and, E894
 - orally fed, absorption and metabolism, G612
 - secretion, hepatic, perfusion rate and, E306
 - very-low-density, triglyceride kinetics, carbohydrate feeding and, E236
 - Lipoprotein lipase
 - endothelial, heart metabolic fate, E247
 - high-fat diet and exercise effects, white and brown adipose tissue, R226

Lipoprotein lipase (*continued*)
 melatonin and, adults (hamster), R812, R823
 Lipoygenase inhibitors, oxygen responses and, cheek pouch arterioles (hamster), H711
 Lithium
 inhibition, adenylate cyclase, renal epithelial cells, F995
 transport, papillary collecting duct cells, F331
 Liver
 amino acid transport, inactivation by PCMBs, C340
 biliary protoporphyrin excretion, bile acid hydroxylation effects, G382
 biosynthetic capacity (hummingbird), R699
 cells: *see* Hepatocytes
 cholesterol metabolism, acetyl-CoA hydrolase activity relations, R724
 clearance of renal renin, glycosylation for, E642
 cotransport, taurocholate and bilirubin glucuronides, G121
¹⁴C-sucrose-insulin uptake, intracellular fate of, C70
 DIDS excretion, bicarbonate effects, G713
 epidermal growth factor, ontogenesis of, E28
 glucose intolerance, thyrotoxicosis, E843
 glutathione efflux by, membrane potential difference in, G547
 glycogen, sensitivity to insulin, circadian rhythm and, muscle, E41
 kidney interrelations, acid-base balance, F807
 lipid peroxidation, metallothionein response to stress, E518
 membrane potential, sex differences, G822
 metabolism, DHEA effects, obesity, E1
 microsomes, acylation of lysophosphatidylcholine (trout), R923
 mirex-induced adaptive growth, hepatocytes and, G132
 mitochondria
 chronic hypobaric hypoxia, C123
 conversion of fura-2 and indo-1, C304
 ontogeny of anorexia, R908
 perfused, thyroxine uptake, E110
 plasma membrane vesicles, sodium-glycine cotransport, G253
 portal vein infusion, physiological enteric stimulation, G319
 protein kinetics, splanchnic leucine extraction effects, R303
 sampling, new method of portal vein cannulation, G191
 sodium-hydrogen exchanger in, G346
 SV40-transformed hepatocytes, growth-dependent regulation of system A in, C261
 thyroid hormone kinetics, D-propranolol treatment and, E80
 triacylglycerol secretion, flow rate and insulin effects on, E306
 uptake index, obesity and, E54
 LLC-PK₁ cells
 activity of ANF, cGMP as biological marker of, F1220
 clones, trehalase expression after glucose starvation (pig), C816
 epidermal growth factor and, F1191

phosphoinositide hydrolysis, vasopressin stimulation of, C502
 sodium-hydrogen antiport, mutant, C495
 sodium-lactate cotransport, apical membranes, F1249
 sodium-sugar cotransport system, polarization marker, C745
 Loading, sodium, gene expression and, ANF, H245
 Locomotion, sprint running, muscle composition and (lizard), R470
 LTC₄: *see* Leukotriene C₄
 Lumbar nerve, unequal bulbospinal influences on, R946
 Lung
 chronic disease, cathepsin G and type II pneumocytes, C603
 compensatory growth, collagen synthesis changes during, C754
 cyclooxygenase-inhibited, serotonin and, H1096
 inflation reflex, coronary circulation and, H866
 modulation of cyclase activity, glucocorticoids, E153
 muscarinic regulation, pulmonary intravascular volume and, H1219
 perfusion effects, fluid filtration (lamb), H1336
 postpneumonectomy growth, perioperative hypoxemia effects, E65
 squamous cell carcinoma, synthetic tumoral PTH-related peptide effects, F957
 upper airways, pulmonary and systemic blood flow contributions, H1130
 vascular disease
 endothelial injury and, H1484
 intralipid effects, H1499
 vascular reactivity, biogenic amines in acute hypoxia, H329
 Luteinizing hormone
 GnRH and secretagogue-induced release, calmodulin antagonist effects (calf), E59
 GnRH sensitivity, underfeeding and, prepubertal females, E482
 pulsatile secretion, computer simulation, E775
 pulses, electrolytic and chemical hypothalamic lesion effects, E583
 release, hypothalamic GnRH sequence, menstrual cycle, E696
 response to arachidonic acid and protein kinase C, gonadal steroid effects on, E314
 Luteinizing hormone-releasing factor, gonadal suppression, growth during, E559
 Lymph
 fistulas, pulmonary vascular response to PAF, awake state (sheep), H434
 flow
 lung, during increased blood flow, H1149
 lung, perfusion effects (lamb), H1336
 pulmonary embolism, H1075
 pulmonary and peripheral, protein clearance after surgery (sheep), H1421
 Lymphatics
 constriction, catecholamines, carotid occlusion, or hemorrhage, H514
 venous pressure, pleural effusions and (sheep), H492
 Lymph duct, right albumin reabsorption kinetics, H375

Lymphokines, corticosterone-releasing effects, R839
 Lymphostasis, intramural, vascular mechanics and, H1289
 Lymph vessels, prenodal, constriction of lymphatics, H514
 Lysophosphatidylcholine, acylation in microsomes, theramilly acclimated liver (trout), R923
 Lysosomes
 intracellular fate, liver, C70
 metabolism, kidney tubules, F520

M

Macromolecules, bone, age-related changes in calcium binding capacity, H101
 Macula densa, renin secretion, osmotic forces; and, F1
 Magnesium
 activation, smooth muscle, taenia coli (guinea pig), C465
 brain and CSF composition, long-term anoxia effects, diving (turtle), R338
 cytoplasmic, concentration, platelets, H855
 subcellular electrolyte shifts, myocardial ischemia and reperfusion, H917
 Malic enzyme, DHEA treatment and, obesity, E1
 Malonaldehyde
 content, exercise effects, skeletal muscle, C874
 oxidant injury, postischemic acute renal failure and, F450
 Mammary gland, lipid biosynthesis, prolactin effects, E567
 Mannose, pancreatic islet discrimination of, computer simulation, E189
 Manometry, contractile activity, colon, G660
 Maternal-fetal interaction, prenatal melatonin injections, entrainment of circadian rhythms in pup (hamster), R439
 Maturation: *see also* Development; Growth
 β -adrenoceptor-mediated responses, fetus (lamb), R794
 GnRH sensitivity, underfeeding and, prepubertal females, E482
 heart, metabolic hyperemia and (guinea pig), H1460
 postnatal, inotropic responses during, H335
 skeletal, sex steroids impact on, E559
 MDA: *see* Malonaldehyde
 MDCK cells
 apical membrane, ammonia permeation via lipid pathway, F135
 epidermal growth factor and, F1191
 lipid order in, F22
 Meals: *see* Feeding
 Meclofenamate
 pressor response to serotonin and, lung, H1096
 serotonin responsiveness and, coronary arteries, H1032
 Median preoptic nucleus, neurons, inhibition by subfornical organ and anteroventral third ventricle, R961
 Medulla oblongata, ventrolateral, angiotensin receptors, H1011
 Meiosis, oocyte, GnRH effects (goldfish), R268
 Melanocyte-stimulating hormone, interactions with interleukin 1, effects on

- sleep, behavior, and brain temperature, R914
- Melatonin**
2-deoxy-[1-¹⁴C]glucose uptake and, suprachiasmatic nucleus, R332
entrainment, female activity rhythms, R237
long-day responses and short-day housed, adult (hamster), R823
prenatal injections to mother, entrainment of circadian rhythms in pup (hamster), R439
reproductive quiescence induced by, exercise inhibition (hamster), R718
short-day responses and, adults (hamster), R812
- Membrane**
apical
ADH effects, urinary bladder (toad), F375
cation channel, inner medullary collecting duct, F278
cytochalasin B effects, bladder (toad), C526
enzymatic and transport characteristics (snake), R52
function, everted renal tubule and (salamander), F1276
MDCK cells, ammonia permeation via lipid pathway, F135
potassium conductance, gallbladder epithelial cells (guinea pig), C808
basolateral
renal, hypertaurinuria and, F88
renal vesicles, *p*-aminohippurate transport by, F597
vesicles, small intestine, calcium transport, G298
luminal
histidine effects on vasopressin action, bladder (toad), F685
renal cortical epithelium, E357
renal tubules, TEA transport by (snake), F167
plasma
calcium pump, transport capacity (toad, pig), C226
chloride pump, R677
kidney, thermal adaptation (trout), R622, R628
placental, chloride transport, fluorescence measurement, C789
secretory granule, potassium transport, pancreas and parotid gland, C705
Mendelian inheritance, inborn errors, physiological processes revealed through, F1047
Menstrual cycle, alterations, hypothalamic GnRH sequence, E696
6-Mercaptopurine, ammoniogenesis, intranephron, F1122
Mesangial cells
glomerular
growth, vasopressin effects, F898
vasopressin-induced calcium mobilization, F771
insulinlike growth factor I synthesis, F1214
phospholipase C activation in, prostaglandins and thromboxane A₂, F1059
transmembrane signaling, leukotriene receptors, C771
Mesenteric artery
nitric oxide, electrical and mechanical properties, H207
sarcolemmal membrane vesicles, sodium-calcium exchange, C323
Mesenteric vein, excitatory cholinergic innervation, H288
Mesentery
autoregulation in, elevated ambient oxygen effects, H131
blood flow: *see* Blood flow
Mesonephros, renal allometry (lizard), R760
Metabolic activity, activation of paratrigenal nucleus, entrance to hibernation (squirrel), R178
Metabolic control, food intake, after 2-deoxy-D-glucose and nicotinic acid injection, R82
Metabolic rate, growth and obesity, acceleration by group housing, R128
Metabolic responses, recombinant human tumor necrosis factor, E206
Metabolic scaling, theory of similitude, R350
Metabolites, concentrations, individual muscle fibers, stimulation and, C543
Metanephros, renal allometry (lizard), R760
Methacholine, inhibition of ANP secretion, H1429
Methazolamide, sodium-chloride absorption and, proximal tubule, F461
Methionine, metabolism, quantitative study, E322
Methionine-enkephalin
gradient in muscle cells, biliary tract, G647
release, blood and CSF, hemorrhage effects, R731
Methoxamine
adrenergic stimulation and, ANP release, E260
catecholamine-stimulated acid secretion and, jejunum, G640
Methoxyverapamil, vasoconstriction, renal, H885
N-Methyl-DL-aspartate, LH pulses, arcuate nucleus and, E583
Methylene blue
bioassay of endothelium-derived relaxing factor, H1259
cGMP and, renin release, F474
internal anal sphincter relaxation, G571
3-*O*-Methylglucose, transport, stimulation, growth hormone, E723
Methysergide, renal sympathoinhibition, during severe hemorrhage, H496
Metiamide, adrenergic-histaminergic interactions, neural, hindpaw, H426
Microaggregates, blood flow distribution determined by, intrarenal, H1535
Microcatheterization, acidification, inner medullary collecting duct, F307, F1155
Microcirculation: *see also* Blood flow; Microcirculation
 α -adrenoceptors, temperature effects, H121
cerebral
bioassay of endothelium-derived relaxing factor, H1259
blockade from acetylcholine and nitric oxide, H847
kinins and vascular reactivity, H397
cutaneous, control during perfusion pressure, wing (bat), H1114
elevated ambient oxygen and, mesentery, H131
gastric mucosa, ethanol vasoaction, arachidonic acid effects, G731
lipid absorption and, intestinal, G690
local vascular resistance and, effective diameter, H1240
medullary, ureteral excision effects on solute concentration, F1225
oxygen response, arterioles, lipoxigenase inhibition of (hamster), H711
red cell velocity, functional hyperemia (hamster), H236
Microdialysis
adipose tissue, lipolysis studies, E737
glucose intercellular levels, subcutaneous tissues, E218
Microneurography, reflex activation of sympathetic nervous system, ANF effects, H685
Microperoxisomes, properties and subcellular localization, myocardial, H441
Microscopy
electron
endolymph secretion, semicircular canal (shark), F711
immunodissection of thick ascending limbs, kidney, F704
fluorescence
oncogene expression and junctional permeability, C674
vasopressin analogue, collecting duct cells, C622
video, Nomarski and fluorescence imaging during, C566
Microsomes, liver, acylation of lysophosphatidylcholine (trout), R923
Microspheres
fluorescent, angiotensin II probe, C452
radiolabeled
blood flow and secretion of salt glands, VIP effects (duck), R575
intrarenal blood flow distribution, H1535
naloxone and circulatory changes in endotoxin shock, awake state, H1106
upper airway blood flow, H1130
vascularized skeletal muscle grafts, blood flow in, H1043
Microtubular network, antidiuretic response and (frog), F1098
Microvascular cell, injury, allopurinol and, H202
Mineral, absorption, transcellular, glucose enhancement of, intestine, G339
Mineralocorticoids
aldosterone-vasopressin interactions, central, R166
potassium regulation, aldosterone role in, F811
sodium chloride permeability and, inner medullary collecting duct, F421
Mitochondria, liver and heart, chronic hypobaric hypoxia, C123
Models
blood flow distribution, intrarenal, H1535
carbon dioxide partial pressure, variations, renal cortex, F349, F361
compartmental, tracer methodology, E94
electrical analog, coronary veins, H834
ellipsoid, linear transformation and, ventricular ejection fractions of, H197
end-systolic pressure-volume, pressure-wall thickness relations, H679
gastric ulceration, G395

Models (*continued*)

- general biophysical, episodic endocrine gland signaling, E749
- intramyocardial pressure, coronary flow and, H664
- mathematical, atrioventricular nodal transmission, H1247
- 3-OHB and insulin effects, dietary obesity, R974
- reflex summation, H1244
- regulation of shortening velocity, cross-bridge cycling, smooth muscle, C86
- theoretical, insulin effects on deoxyglucose metabolism, E806
- thyroxine uptake, perfused liver, E110
- vasodilatory therapy effects, pulmonary hypertension, H1232
- Windkessel, aortic input impedance, H742

- Monensin, cell death in hepatocytes, extracellular acidosis effects, C315
- Monocarboxylic acid, transport, apical membranes, F1249
- Monoclonal antibodies
 - against sodium channel protein, renal papilla, C835
 - anti-receptor, kidney cytosol, E293
- Monocrotaline pyrrole, pulmonary hypertension caused by, thrombocytopenia effects, H1165
- Mono-hydroxyicosatetraenoic acid, histamine stimulation of, endothelial cells, C214

Motility

- colonic, regional differences, G787
- gallbladder, G409
- gastric
 - CCK effects, G55
 - cholecystokinin effects, G242
- gastrointestinal, denervation effects (turkey), G1
- gastrointestinal
 - ketocyclazocine and, G566
 - membrane potential effects, proximal colon, C828
- intestinal
 - anaphylaxis and, G505
 - CCK regulation of, G498
- pyloric
 - opioid receptors in, G352
- topography and measurement, G490
- small intestine, lipid infusion after meals and, G800
- villous, neurohumoral control, G162

- Motoneurons, axonal protein transport, exercise training and, C731

- Motor activity, cyclic, gallbladder, G409

- Motor complex, migrating, gallbladder, G409

- Motor units, soleus, electromechanical and metabolic properties, C684

- MSH: see Melanocyte-stimulating hormone

- Muramyl dipeptide, sleep and fever induced by, R157

- Muscle
 - antral, neurokinin effects, G779

- chronic stimulation, metabolite concentration of fibers, C543

- circular, plexus neurons, [³H]saxitoxin binding, G462

- composition, sprint running and (lizard), R470

- fast-twitch, external anal sphincter, G772

- forearm, pH and lactic acid output, exercise, F479

- glucose metabolism, physical inactivity and, E456

- glycogen storage, prolonged insulin stimulation and, E621

- insulin resistance, obesity, E374

- insulin sensitivity, circadian rhythm and, E41

- metabolic changes, track sprint running (greyhound), R513

- papillary: see Muscle, heart

- regenerating, hemin effects on aerobic capacity, C519

- skin and, albumin flux and volume flow in, H458

- subcellular enzyme, glycolytic control (fish), R289

- Muscle, heart
 - cells, carbon monoxide effects, C291

- contractile force, single cells vs. ventricular muscle strips (frog), H111

- function, during stress, E518

- inotropic response, changes during post-natal maturation, H335

- myosin heavy chains, separation, H659

- positive force-frequency staircase, intracellular sodium role in (guinea pig), C798

- subcellular enzyme, glycolytic control (fish), R289

- tension, superoxide anion and, H138

- Muscle, skeletal
 - after isometric contraction, glucose 1,6-bisphosphate, C145

- circulatory occlusion, glucose 1,6-bisphosphate during, C140

- denervated, adrenalectomy and diet effects, E850

- energy metabolism, cimaterol effects, R952

- exercise intensity, MDA content and, C874

- fiber types, adenine nucleotide synthesis in, C271

- glucose
 - euglycemic hyperinsulinemia, E942

- non-insulin- and insulin-mediated uptake, E769

- glutamine synthetase expression, dexamethasone effects, E397

- hormone stimulated glucose transport, phenylarsine oxide and denervation effects, E159

- hypertrophy, growth hormone-stimulated, IGF-I and -II gene expression, E513

- ischemic, intracellular sodium flux and high-energy phosphorus metabolites in, C377

- limb, exercise, substrate exchange during, H1156

- myosin heavy chains, separation, H659

- norepinephrine turnover, genetic hypertension, H736

- oxygen consumption, heating contralateral hand and, E572

- protein kinetics, splanchnic leucine extraction effects, R303

- protein synthesis, glutamine concentration relations, E166

- sarcoplasmic reticulum, fura-2 monitoring of calcium uptake, C694

- sodium-potassium-ATPase isoforms, thyroid hormone, E912

- sodium-potassium transport, thyroid hormone effects, E604

- sympathetic nervous system responses, diet and cold exposure, E180

- thermogenic agent effects, insulin receptors, obesity, E101

- vascularized grafts, blood flow in, H1043

- Muscle, smooth
 - anal sphincter
 - purinoceptors in (opossum), G389

- relaxation, G571

- arterial, nitric oxide, H207

- calcium pumps, superoxide radical effects, C297

- colonic, electrical coupling and pacemaker activity, C653

- contraction, length dependence (swine), C473

- contraction and relaxation, myosin phosphorylation and, C34

- cross-bridge phosphorylation
 - regulation of shortening velocity, model, C86

- strontium effects (pig), C401

- esophageal, response to distension (opossum), G587

- ethanol vasoaction in, arachidonic acid metabolite effects, G731

- gallbladder, CCK receptor, labeling using probes, G579

- heat production, during isometric contraction, C536

- intestinal, leukotriene C₄, effects, electro-mechanical activity and calcium uptake (guinea pig), C433

- jejunal, antigen-induced contraction, G701

- microvascular, local tissue cooling effects, H121

- muscle and skin, albumin flux and volume flow in, H458

- phorbol diester-stimulated contraction, myosin phosphorylation in (swine), C719

- proximal colon, electrical slow waves, membrane potential effects, C828

- regional differences, response to neuropeptides, G787

- taenia coli, magnesium activation of (guinea pig), C465

- vascular
 - acetate and cAMP in, H1378

- adenosine effects on calcium influx, H1492

- calcium-activated potassium channels, H754

- intramural lymphostasis and, H1289

- myogenic activity (pig), H1554

- oxygen consumption of calcium ions, carotid artery (pig), C393

- oxygen free radical effects, diabetic aorta, H825

- phosphoinositide metabolism, H1476

- potassium depletion, hypertension and, H1181

- sodium-calcium exchange, mesenteric artery, C323

- villous, neurohumoral control, G162

- visceral, gallbladder muscularis smooth muscle cells, G653

- Muscle cells
 - aortic smooth, calcium-activated potassium channel, cAMP effects, H754

- cardiac, carbon monoxide in, C291

- functional gradients, gallbladder, cystic duct, and common bile duct, G647
- muscularis smooth, gallbladder, culture behavior, G653
- organ and smooth cultures, cholesterol metabolism, aorta, fetus, H160
- smooth
- calcium-activated potassium channel, aortic media, H410
 - contraction, prostaglandin effects, colon, G807
- vascular smooth
- cGMP response to ANF, spontaneous hypertension, C573
 - epidermal growth factor-mediated effects (horse), C447
 - hypertension, reduced sodium-potassium-chloride cotransport, C169
- Muscle fiber
- individual, metabolite concentrations, stimulation and, C543
 - size properties, tibialis anterior motor units, C43
 - types
 - glycogen storage during insulin stimulation, E621
 - insulin resistance, obesity, E374
 - sprint running and (lizard), R470
- Myeloperoxidase, myocardial reperfusion injury and, H1060
- Myenteric plexus, synaptic behavior, distal colon (guinea pig), G184
- Myocardium
- calcium currents, hypertrophied myocytes, H1434
 - contractility, superoxide anion and, H138
 - coronary veins, nutritional capacity and pressure-flow relations, H834
 - hypertrophied
 - ATP-sensitive potassium channels, H1254
 - microvascular perfusion, renal hypertension, H1384
 - infarction, L-thyroxine treatment, H801
 - isolation of translation-inhibiting peptides, H1024
 - metabolism, coronary flow and, endotoxemia effects, H1295
 - perfusion injury, neutrophil accumulation relations, H1060
 - rate of relaxation, separation from chamber stiffness, H1468
 - segmental length, effects of LTC₄ and TxA₂, H153
 - stretch, oxygen consumption in potassium-chloride arrested heart, H807
 - stunned, electrical and mechanical arrest effects, H60
 - ventricular, refractoriness, hysteresis in, H1342
 - wall thickness
 - asynchrony, awake state, H358
 - selective cardiac denervation and, awake state, H525
- Myocytes: *see also* Cardiomyocytes; Heart cells, Ventricular cells
- atrial, calcium-antagonistic effects of adenosine (guinea pig), H872
 - calcium current, antibody enhancement of, H960
- cardiac
- attachment and maintenance, C19
 - cytosolic free calcium and respiratory rate relations, H347
 - deenergization, calcium dynamics and, C162
 - growth, carbon monoxide effects, C291
 - ventricular
 - calcium currents in, H1434
 - hypertrophied, ATP-sensitive potassium channels, H1254
 - phenylephrine effects on calcium current, H1173
- Myoelectric activity
- intestinal
 - intraluminal nutrient effects, G12
 - ketocyclazocine and, G566
 - motility and anaphylaxis, intestinal, G505
 - Myoelectric complex, migrating, sphincter of Oddi (opossum), G619
- Myofibrils, subcellular electrolyte shifts, myocardial ischemia and reperfusion, H917
- Myogenic activity, coronary arterioles (pig), H1554
- Myogenic tone, pulmonary arteries, H1391
- Myoglobin, renal failure induced by, F539
- Myometrium, pregnancy, α_2 -adrenoceptors in (guinea pig), E272
- Myosin, heavy chains, cardiac, separation of, H659
- Myosin isoenzyme, composition, myocardial infarction treatment, H801
- Myosin light chain kinase, cross-bridge cycling, smooth muscle, model, C86
- Myosin light chain phosphorylation
- length dependence, smooth muscle contraction (swine), C473
 - phorbol diester-stimulated smooth muscle contraction (swine), C719
 - smooth muscle contractions and, C34
 - smooth muscle (guinea pig), C465
 - strontium effects, smooth muscle (pig), C401
- Myotubes, skeletal, aerobic capacity, hemin effects, C519
- N
- Naloxone
- cardiac baroreflex properties, differentiation, R654
 - development of hypertension and, E839
 - endogenous, involvement in gastric emptying of fat test meals, G158
 - modulation of baroreflexes, hypertension and, H987
 - myoelectric activity and, intestine, G566
 - organ blood flow and, during endotoxic shock (pig), H177
 - organ perfusion and, during endotoxin shock, awake state, H1106
- Naltrexone, CCK interactions, behavioral evidence, neonate, R901
- Natriuresis
- ANF
 - dose response and pharmacokinetics, kidney, R929
 - release, hypophysectomy, R534
 - secretion, renal responses, F936
 - ANP receptors, inner medullary collecting duct cells, F324
 - during atrial distension, plasma atriopeptin decline and, R259
 - exaggerated, essential hypertension, ANP role in, F1085
 - hypothalamic factor regulation of, renal cells, F574
- low-dose ANP infusion and, anesthesia, R449
- pressure
- interstitial hydrostatic pressure during, hypertension, R756
 - NE-ACTH hypertension and, R894
 - pressure-dependent, low concentrations of ANP and, F391
 - renal activity of ANF, cGMP as biological marker of, F1220
 - renal nerves, volume expansion and (monkey), R388
 - salt adaptation, ANF and (fish), F1281
 - vasopressin effects, E449
- Natural killer cells, cytotoxicity, CRF effects, R744
- Neoglycoproteins, clearance of glycosylated α -amylase, G374
- Neonate: *see also* Infant; Newborn
- behavior, CCK-opiate interactions and, R901
 - gap junctional channels, heart cells, H770
 - hyperthermia effects, cerebral metabolic rate and blood flow (pig), H343
 - independent ingestion, CCK effects, R14
 - postnatal undernutrition, bronchiolar epithelial development and, R521
 - pulmonary circulation, perfusion effects (lamb), H1336
 - ureteral obstruction, renin-angiotensin system response to relief of (guinea pig), F1070
- Neostigmine, hyperglycemia, CNS-mediated, E920
- Nephrectomy
- insulin-like growth factor I receptors, E504
 - thirst mechanisms, R217
 - unilateral, compensatory growth and, F270
- Nephrocalcin, crystal absorption, growth slowing and, F1197
- Nephron
- cellular ATP along, substrate specificity, F977
 - distal, potassium regulation, aldosterone and, F811
 - juxtamedullary, amino acid transport, F397
- Nephropathy, potassium depletion, renal epithelial cell growth, F868
- Nephrotoxicity
- gentamicin, microsomal protein synthesis inhibition, F265
 - iron and, F539
- NE: *see* Norepinephrine
- Neural control
- contraction rate, sphincter of Oddi (opossum), G619
 - immune function, R744
 - rectal gland (shark), R212
- Neural lobe, blood flow, during hypercapnia, R295
- Neuroblastoma cells, cell cycle dependence, inositol phosphate effects, C531
- Neuroeffector system, vascular α -adrenergic, diabetes, H1036
- Neurogenic factors, arterial pressure, awake state, R693
- Neurohumoral control, villous motility, G162
- Neurohypophysis, hypercapnia, blood flow during, R295
- Neurokinin, effects on antral muscle, G779

- Neuromuscular transmission, insulin effects, soleus axon function, C60
- Neuronal activity, during sleep (squirrel), R1008
- Neurons
- afferent, capsaicin treatment, intestinal satiety and, R569
 - deep muscular plexus, [³H]saxitoxin as marker for, G462
 - fast synaptic cholinergic activation, celiac ganglia, G759
 - inhibitor, internal anal sphincter (opossum), G389
 - myenteric, synaptic behavior, distal colon (guinea pig), G184
 - myenteric and submucosal, localization of serotonin receptors, G603
 - neurosecretory, inhibition by subfornical organ and anteroventral third ventricle, R961
 - plexus, cardiac, activity, H789
 - sympathoexcitatory, GABA-mediated inhibition of, R605
 - ventromedial hypothalamic, endogenous sugar acid effects, R134
- Neuropeptides
- autonomic nervous system, natural killer cytotoxicity and, R744
 - comparison of effects, heart rate, H311
 - gastric functions, CNS regulation of, G298
 - responses and mechanics, proximal and distal colon, G787
- Neuropeptide Y
- calcium mobilization, erythroleukemia cells, E880
 - release, pancreas (pig), G46
- Neurotensin
- chronotropic effects, heart rate, H311
 - growth stimulation, small intestine, G813
 - immunoneutralization, gastric acid secretion and, G40
 - responses and mechanics, proximal and distal colon, G787
 - tracheal and phrenic responses to, ventral medulla, R780
 - tracheal and phrenic responses, ventral medulla, R780
- Neurotransmission, noradrenergic, adenosine role in, H386
- Neutrophils
- accumulation
 - myocardial perfusion injury and, H1060
 - myocardial reperfusion injury, H1188 - ischemia-reperfusion injury, isolated perfused kidney, F728
 - stimulated response, diacylglycerol kinase inhibitor R59022, C589
- Newborn: see also Infant; Neonate
- cerebral blood flow, sympathetic regulation during seizures (lamb), H563
 - postischemic generation of superoxide anion, brain, H401
- Nicotinamide, inhibition of phosphate transport, renal brush-border membrane vesicles, F15
- Nicotine, afferent autonomic reflexes and, myocardial ischemia, H26
- Nicotinic acid, injection, metabolic control of feeding and, R82
- Nifedipine
- gastrin and somatostatin release, stomach, G627
 - venous volume and tone, forearm, H947
- Nitrate, glutathione efflux and, hepatocytes, G403
- Nitrendipine, hormone release and, pituitary tumor cells, E137
- Nitric acid, blockade, cerebral vasodilation, H847
- Nitric oxide, arterial smooth muscle, H207
- Nitrogen, balance, protein metabolism during bedrest, E548
- Nitroglycerin
- independent blockade, cerebral vasodilation, H847
 - oxygen free radical effects, endothelium-dependent relaxation of diabetic aorta, H825
 - vasodilatory therapy effects, pulmonary hypertension, model, H1232
 - venous volume and tone, forearm, H947
- Nitroprusside
- cGMP and, renin release, F474
 - hydraulic conductivity and, cortical collecting tubules, F841
- Nocodazole, antidiuretic response and, urinary bladder (frog), F1098
- Nomarski imaging, fluorescence and, video microscopy of cells, C566
- Noradrenergic nerves, purinergic, internal anal sphincter (opossum), G389
- Noradrenergic system, myoelectric activity, intraluminal nutrient effects, intestine, G12
- Nordihydroguaiaretic acid, inhibition of oxygen responses, cheek pouch arterioles (hamster), H711
- Norepinephrine
- adenosine and noradrenergic neurotransmission, H386
 - β -adrenergic mechanisms and, insulin action, E33
 - ANF vasodilatory action and, glomerular afferent arterioles, F415
 - ANP secretion stimulated by, methacholine inhibition, H1429
 - arterial, changes in coronary occlusion, H704
 - bicarbonate secretion and, gastric, G752
 - chloride transport and, corneal epithelium (frog), C724
 - cold and diet effects, skeletal muscle, E180
 - excretion, during leg exercise, H15
 - glucose metabolism and, endotoxemia, E629
 - hypertension, response of large artery diameter, H36
 - hypotension and, mature and immature fetus (lamb), R67
 - intestinal response, G18
 - intravenous endothelin effects, awake state, R1064
 - neuronally released, renin release by, F614
 - pial arteriolar responses to, trigeminalotomy effects, H1
 - plasma renin activity and, awake state, E793
 - renin and vasopressin release, ANP inhibition, R368
 - responses to angiotensin II, antiserum to angiotensin-binding protein, H1542
 - temperature regulation and (goldfish), R600
 - turnover
 - adrenalectomy effects on brown fat metabolism, E597
 - cardiac hypertrophy, H452
 - genetic hypertension, H729, H736
 - iron deficiency and, environmental temperature effects, R90
 - vagal activity, hypotensive lower-body negative pressure effects, R149
 - vascular reactivity and, saphenous vein, H860
 - venomotor responses, central and local hypoxia, H760
- Nuclear magnetic resonance
- cytoplasmic magnesium concentration, platelets, H855
 - phosphate 31, energy-depleted normoxic heart, C192
 - phosphate metabolites, renal, F581
 - phosphorus 31, intracellular pH, skin (frog), F126
- 5'-Nucleotidase, marker, deep muscular plexus neurons, G462
- Nucleotides
- guanine, phospholipase C and, C667
 - metabolism, glomerular, F635, F647
- Nucleus tractus solitarius
- cardiovascular changes, area postrema stimulation and, R855
 - microinjection of ANF, cardiovascular responses, R182
- Nutrients
- absorption, regulatory signals for, intestinal, G151
 - intraluminal, effects on intestinal myoelectric activity, G12
- Nutrition, enteral, amino acid protein metabolism, R303

O

- Oat bran, colonic transit time and, radiographic analysis, G633
- Obesity
- abnormal regulation of cAMP, pancreatic islets, E833
 - ACTH, adrenocortical cell responsiveness to, E229
 - CRF effects, food intake and brown fat thermogenesis, E255
 - DHEA administration effects, liver metabolism, E1
 - dietary, 3-OHB and insulin effects, model, R974
 - genetic, food restriction and adrenalectomy in, R787
 - growth and, acceleration by group housing, R128
 - insulin receptors, BRL 26830A effects, E101
 - insulin resistance, muscle, E374
 - meal frequency, energy utilization and, R616
 - oxygen consumption, forearm, measurement, E572
 - regulation of energy stores, E332
 - sympathetic activity, hypothalamic lesions, R507
 - thyroid hormone transport impairment, E54
- 3-OH: see 3-Hydroxybutyrate
- Olfactory bulb
- anoxia
 - evoked potential activity and (turtle), R478
 - orthodromic field potentials (turtle), R485
- Oligonucleotide probe, inborn errors, physiological processes revealed through, F1047

Omeprazole, valinomycin stimulation, gastric acid formation, G313
 Oncogenes, expression, junctional permeability and, C674
 Oocytes
 cardiac sarcolemmal, sodium-calcium exchange activity (toad), C870
 follicle-enclosed, GnRH effects (goldfish), R268
 Opiates
 CCK interactions, behavioral evidence, neonate, R901
 endogenous, involvement in gastric emptying of fat test meals, G158
 modulation of baroreflexes, hypertension and, H987
 Opioids
 endogenous, naloxone effects on hypertension, E839
 organ blood flow and, endotoxin shock (pig), H177
 organ perfusion and, during endotoxin shock, awake state, H1106
 receptors: *see* Receptors
 Oral mucosa, active electrolyte transport, G286
 Ornithine decarboxylase
 gastric mucosal, gastrin effects, G305
 gene expression, CCK effects, pancreas, G818
 renal, compensatory growth and, F270
 Osmolytes
 major organic, renal inner medulla, in dehydration, F626
 survey, renal cell lines, C181
 Osmoregulation
 ontogeny, implications for, kidney (lizard), R760
 osmolytes, renal cell lines, C181
 salt adaptation, ANF and (fish), F1281
 vasotocin-induced antidiuresis (kelp gull), R936
 Osteoblast
 inositol polyphosphates and diacylglycerol, PTH elevation of, E660
 pH and DNA synthesis, parathyroid hormone effects, E9
 Osteoclasts, changes, after weightlessness in short spaceflight, R243
 Osteoporosis, disuse, glucocorticoids and, E875
 Ouabain
 binding, sodium-potassium-ATPase isoforms and, E912
 endolymph production and, semicircular canal (shark), F711
 hypercalcemia and, ANP release, E437
 membrane potential, parotid acini, C508
 membrane potential and glutathione efflux, hepatocytes, G403
 potassium-rubidium fluxes resistant to, volume and anion dependency, erythrocytes (sheep), C331
 proatrial natriuretic factor secretion and, atrial cardiocytes, E383
 sodium-potassium pump, insulin and, E953
 sodium-potassium transport and, skeletal muscle, E604
 uptake, endocytosis, atria (guinea pig), C479
 Oxidant injury, renal failure, postischemic acute, F450
 Oxidants, cultured epithelial cell monolayers, C781

Oxidation, succinate, sodium effects, intestine, C95
 Oxidative capacity, adenine nucleotides, skeletal muscle fiber types, C271
 Oxidative injury, renal proximal tubules, C28
 Oxygen
 consumption
 blood flow relations, muscle, H1004
 calcium ions, carotid artery (pig), C393
 dopamine effects, cortical tubule cells, F666
 during urethan anesthesia, R73
 endotoxemia effects, heart, H1295
 lateral hypothalamic lesions, E708
 left ventricular, H366
 measurement, forearm, E572
 myocardial, adult vs. immature (guinea pig), H1460
 myocardial respiratory control, H185
 myocardial, Windkessel model, H742
 potassium-chloride-arrested heart, H807
 sympathetic nervous system and brown fat effects, E617
 transport-related, benzodiazepine effects, kidney medulla, C385
 triacylglycerol secretion and, liver, E306
 content, blood, H1545
 deficit, hypoxanthine and lactate concentrations (lamb), H53
 dysfunction, renal proximal tubules, C28
 elevated ambient, autoregulation in mesentery, H131
 exercise at reduced blood flow, limb muscle, H1156
 generation, diacylglycerol kinase inhibitor R59022, C589
 partial pressure, estimation of oxygen content in blood and, H1545
 responses, lipoxygenase inhibitor effects, cheek pouch arterioles (hamster), H711
 stress, glutathione and, renal proximal tubules, F874
 tension, blood flow relations, muscle, H1004
 transport
 postnatal intestinal circulation and (swine), H1144
 rheology and, functional hyperemia (hamster), H236
 uptake
 during β -adrenergic blockade, H77
 respiratory rate relations; myocytes, H347
 Oxygen-18, presence in water, measurement by infrared absorbance, R175
 Oxygenation, cerebral response to, fetus in utero (sheep), R1049
 Oxygen metabolites, ischemia-reperfusion injury, kidney, F728
 Oxygen radicals
 endothelium-dependent dilation and coronary resistance bed, H765
 diabetic aorta, H825
 free
 acute renal failure and, F539
 postischemic acute renal failure, F450
 papillary muscle tension and, H138
 Oxypherol, intracellular pH and inorganic phosphate content, heart, H189
 Oxytocin
 cation content and electrophysiology, skin epithelium (frog), C357

hydrosmotic effects, calcitonin and, bladder (toad), E613
 molecular events in expression of, cognate receptors and, F207

P

Pacemaker
 activity, colonic smooth muscle, C653
 circadian, inhibitor of protein synthesis phase shifts (hamster), R1055
 Pacemaker complex, baroreflex modulation, heart rate and atrial activation, H503
 PAF: *see* Platelet-activating factor
 Pancreas
 cell uncoupling, protein kinase C and, C699
 exocrine
 secretion, PP role in, G535
 secretion, repeated trypsin inhibitor treatment, G236
 glucose intolerance, thyrotoxicosis, E843
 growth, after partial resection, G670
 neuropeptide Y release (pig), G46
 ornithine decarboxylase gene expression, CCK effects, G818
 secretion
 CCK regulation of, G498
 endopeptidase 24.11 and, G676
 zymogen granules, potassium transport, C705
 Pancreatectomy, pancreatic growth after, G670
 Pancreatic acini
 amylase secretion, caerulein effects, G33
 CCK antagonist, G261
 CCK binding (guinea pig), G106
 cell line, somatostatin receptors on, G113
 cells
 gallbladder and, CCK receptors on, G512
 G protein stimulation of PI hydrolysis, CCK and, E652
 cell uncoupling, protein kinase C and, C699
 Pancreatic acinar cells
 agonist-sensitive calcium pool in, G221, G229
 potassium currents, patch-clamp study (guinea pig), G275
 processing of CCK, G738
 Pancreatic cells
 β -cells
 glucose inhibition of insulin, diazoxide effects, E422
 glucose tolerance, epinephrine effects, E668
 insulin release, furosemide effects, E591
 Pancreatic enzymes, secretion, CCK receptors on, G512
 Pancreatic hormone, basal secretion, non-adrenergic sympathetic neural influences, E785
 Pancreatic islets
 abnormal regulation of cAMP, obesity, E833
 discrimination, hexose anomers, computer analysis, E189, E201
 prolonged hypothermia, insulin and substrates in, R1035
 Papillary muscle: *see* Muscle, heart

- Parabrachial nucleus, stimulation, sympathetically mediated pressor response and, H1349
- Parasympathetic nerves, neurohumoral control, villous motility, G162
- Parasympathetic regulation, neuropeptide Y release, pancreas (pig), G46
- Parathyroid hormone
 ammoniogenesis and, renal proximal tubular segments, F847
 exchangeable calcium and blood flow, bone, H94
 immunoreactivity, brain, (tetrapod vertebrates), R635, R643
 infusion effects, phosphate deprivation, F96
 inositol polyphosphate and diacylglycerol, osteoblast-like cell line, E660
 peripheral metabolism, E886
 pH and DNA synthesis, osteoblasts, E9
 phosphaturic effect of, β -receptors in resistance to, R557
 regulation of 1,25-dihydroxyvitamin D synthesis, E730
 resistance, verapamil effects, E702
 sodium-hydrogen exchange and, renal cells (opossum), C76
 synthesis and secretion, calcium effects, E299
 synthetic tumoral related peptide, cAMP production and inorganic phosphate transport, F957
 tubular adaptation, phosphate reabsorption, F278
- Paratrigeminal nucleus, progressive activation, during hibernation (squirrel), R178
- Paraventricular nucleus
 angiotensin II receptors, DOCA-salt hypertension, H646
 blood flow, during hypercapnia, R295
 lesions, angiotensin II drinking and pressor responses, R882
 neurons, inhibition by subfornical organ and anteroventral third ventricle, R961
 stimulation, gastroduodenal mucosal necrosis and, R861
 vasopressin and catecholamines, chronic sinoaortic denervation effects, R768
- Parietal cells, gastric, inositol lipid turnover, G99
- Parotid acinar cells, inositol trisphosphate formation, desensitization by substance P receptors, C149
- Parotid acini, membrane potentials, potassium transport and, C508
- Parotid gland
 calcium uptake, hydrogen-dependent, G429
 zymogen granules, potassium transport, C705
- PC-12 cell line, dopamine release, PAF effects, C559
- PDGF: see Platelet-derived growth factor
- Pectin, colonic transit time and, radiographic analysis, G633
- Pentagastrin, potassium currents and, pancreatic acinar cells (guinea pig), G275
- Pentobarbital, pulmonary vasoregulation and, after hypoperfusion, H569
- Pentobarbital sodium, VIP effects and, vascular conductance, R968
- Peptidases, regulatory signals for, intestinal, G151
- Peptide hormone, cardiovascular, renal, and endocrine response, awake state, R1064
- Peptides: see also Polypeptides
 CCK-8, gastric emptying and feeding behavior, R21
 secretion, nonadrenergic sympathetic neural influences, E785
 translation-inhibiting, isolation from myocardium, H1024
 tumoral PTH-related, cAMP production and sodium-dependent phosphate transport, F957
 vasoactive, C3a, pulmonary artery responses, H1227
 vasoactive intestinal
 blood flow and secretion and, salt gland (duck), R575
 internal anal sphincter relaxation, G571
 lower esophageal sphincter, G441
 neural control of rectal gland (shark), R212
 vascular conductance and, anesthesia effects, R968
- Peptone, meals, gastric emptying and, G685
- Perinatal period, gene expression, ANF, E388
- Perineurium, solute transfer, compartmental analysis, R317
- Peripheral nerve, solute transfer, compartmental analysis, R317
- Peripheral vascular disease, epidermal growth factor, vascular smooth muscle cells (horse), C447
- Peristalsis
 esophageal response to distension (opossum), G587
 high-amplitude propagated contraction, colon, G660
- Permeability
 ammonium, thick ascending limb, F57
 anions, bumetanide effects, intestine (flounder), C246
 capillary
 acute postburn edema and, H1069
 adrenergic-histaminergic interactions, neural, H426
 albumin flux and volume flow in, H458
 endothelial
 lung lymph flow during increased blood flow, H1149
 water and albumin, bacterial exotoxin effects, C368
 epithelial, oxidants and, C781
 junctional, altered, oncogene expression, C674
 membrane, chloride ions, corneal epithelium (frog), 724
 sodium chloride, hormone effects, medullary collecting duct, F421
 solutes, blood-nerve barrier, R317
 tight junctional, hepatocytes, hormonal regulation of, G454
 vascular, during bacteremia (sheep), H1421
 water
 calcitonin inhibition, bladder (toad), E613
 cell membrane, proximal tubules (salamander), F188
 histidine effects, bladder (toad), F685
 temperature effects, endothelial cells (calf), C311
- Pertussis toxin
 cAMP and, obesity, pancreatic islets, E833
 cholinergic inhibition of somatostatin sensitive to, D-cells, G424
 diuresis, α_2 -adrenoceptor agonist-induced, F317
 renal vasoconstriction, adenosine-induced, H885
 substrate, tonic inhibition of response to vasopressin, kidney, F1107
- PGE₂: see Prostaglandin E₂
- PG: see Prostaglandins
- pH
 arterial, hypoxia and, awake state (sheep), R274
 blood, catecholamine release and (trout), R395
 cell
 collecting duct, fluorescent characterization of, F1003
 sodium-hydrogen exchange activity and, lens epithelium (toad), C595
 cell death and, ATP-depleted hepatocytes, C315
 chloride absorption and, intestine (flounder), G247
 citrate reabsorption and, proximal convoluted tubule, F301
 cytosolic, proximal tubules, F787
 depression, parathyroid hormone and, osteoblasts, E9
 estimation of oxygen content and, blood, H1545
 intracellular
 control, renal cells (opossum), C76
 energy-depleted normoxic heart, C192
 inorganic phosphate content and, heart, H189
 skin (frog), F126
 sodium-hydrogen antiport mutant of LLC-PK₁, C495
 whole-cell potassium currents, early distal tubule cells (frog), F699
 intragranular, potassium transport, pancreas and parotid gland, C705
 ionic strength effects and, liver mitochondria, C304
 luminal, ammonia loss and, proximal tubule, F861
 principle cells, skin (frog), F922, F930
 recovery kinetics, atrial cells exposed to lidocaine (frog), H1558
 secretin release, small intestine, G7
 systemic, lactic acid generation and, forearm exercise, F479
- Phenidone, inhibition of oxygen responses, cheek pouch arterioles (hamster), H711
- Phenoxybenzamine
 ANP release and, E437
 plasma renin activity and, awake state, E793
- Phentolamine
 adrenergic-histaminergic interactions, neural, hindpaw, H426
 adrenergic stimulation and, ANP release, E260
 α -adrenoceptors and, microvascular smooth muscle, H121
 blood flow during hypercapnia and, neurohypophysis and hypothalamus, R295
- Phenylalanine, kinetics, time course of cortisol action, E366

- Phenylarsine oxide, denervation and, hormone-stimulated glucose transport, E159
- Phenylephrine
calcium current and, ventricular myocytes, H1173
glutathione metabolism and, hepatocytes, E801
inhibition of ANP secretion, H1429
ontogeny of anorexia, R908
pressor responsiveness, estrous cycle, R1041
- Phenylephrine hydrochloride, ANP release and, E437
- 8-Phenylthiophylline
acetate-increase in blood flow and, portal, G417
jejunal hyperemia, food-induced, G168
- Phloretin, transport site, urea, skin (toad), F429
- Phlorizin, binding, organization of epithelial membrane, C745
- Phorbol diester, smooth muscle contraction stimulated by, myosin phosphorylation in, C719
- Phorbol esters
ANP secretion and, cardiocytes, H405
protein kinase interaction, colonic cell line, G27
sodium-hydrogen exchanger, liver, G346
somatostatin release and, D-cells, G424
vasopressin effects, glomerular mesangial cell growth, F898
- Phorbol 12-myristate 13-acetate, DNA synthesis and pH depression, osteoblasts, E9
- Phosphate
deprivation
cAMP analogue infusion effects, F96
hypoparathyroidism, E730
renal adaptation to, pituitary involvement in, R373
high-energy
after isometric contraction, skeletal muscle, C145
circulatory occlusion, skeletal muscle, C140
cultured myocyte attachment and maintenance, C19
inorganic
ANP-mediated excretion, renal ablation, F1091
pH and, heart, H189
sodium cotransport, kidney cells, C155
transport, synthetic tumoral PTH-related peptide effects, F957
reabsorption
changes in tubular capacity for, F278
parathyroid hormone, β -receptors and, R557
transport
renal brush-border membrane, nicotinamide effects, F15
renal, humor hypercalcemia of malignancy and, F1078
renal, metabolic acidosis in senescence, F1183
succinate effects, proximal tubule, F1170
- Phosphate metabolites, renal, NMR studies of, F581
- Phosphatidylcholine, acylation in microsomes, thermally acclimated liver (trout), R923
- Phosphatidylinositol, turnover, neuroblastoma cells, C531
- Phosphaturia, mechanism, administration of phosphonoformate, F984
- Phosphocreatine, depletion, normoxic heart, C192
- Phosphodiesterase
cyclic nucleotide, activity, postnatal maturation, papillary muscle, H335
inhibitor, glomerular afferent arterioles, F415
- Phosphofructokinase
after isometric contraction, skeletal muscle, C145
organ-specific control of glycolysis, anoxia (turtle), R774
pancreatic islet discrimination of, computer simulation, E189, E201
- Phosphoinositide
hydrolysis, vasopressin stimulation of, LLC-PK₁ cells, C502
metabolism
aorta, H1476
volume regulation, blood cells (skate), R982
- Phospholipase, dexamethasone effects, one-kidney, one-clip hypertension, H717
- Phospholipase A₂, secretion, trypsin inhibitor treatment effects, G236
- Phospholipase C, activation, prostaglandins and thromboxane A₂, mesangial cells, F1059
- Phospholipids
increased SR N-methylation, skeletal muscle, E347
inositol, metabolism, aorta, H1476
orally fed, absorption and metabolism, G612
time course of thermal adaptation, kidney plasma membrane (trout), R622, R628
- Phosphonoformate, administration, mechanism of phosphaturia and, F984
- Phosphorus, high-energy, ischemic skeletal muscle, C377
- Phosphorylation, cross-bridge, strontium effects, smooth muscle (pig), C401
- Photoperiod, maternal history, infant development and (vole), R831
- Phrenic nerve, response to neurotensin, ventral medulla, R780
- Pial arterioles, response to hypertension or norepinephrine, trigeminal ganglion effects, H1
- Pineal gland
melatonin entrainment, activity rhythms and, female, R237
reproductive quiescence induced by melatonin, exercise inhibition (hamster), R718
suprachiasmatic nucleus, melatonin and, R332
- Pinna, oscillating heat flow from, R464
- Pirenzepine, flow-induced enhanced relaxation, acetylcholine, H446
- PI: see Polyphosphoinositide
- Pituitary
anterior, prolactin release, TRH and BAY K 8644 effects, C633
circadian variation in response, CRF-41 and AVP, E265
LH release, calmodulin antagonist effects (calf), E59
LH response, steroid effects on, E314
luteinizing hormone release, calcium and sodium role in (calf), E469
- PTH-like immunoreactivity (tetrapod vertebrates), R635, R643
- renal adaptation to phosphate deprivation, R373
response to bacterial endotoxin, during growth, E525
- Pituitary cells, anterior aggregates, angiotensin II activity, hypertension, R407
- Pituitary tumor cells, hormone release, calcium channels and, E137
- Placenta: see also Fetus; Lactation; Pregnancy
microvillous membrane, chloride transport, fluorescence measurement, C789
- Plasma
constituents: see specific constituent
flow, renal, amino acid and hormone level effects, F444
pancreatic polypeptide concentration, peak, exocrine pancreas secretion and, G535
- Plasma membrane: see Membrane
- Platelet-activating factor
dopamine release and, PC-12 cell line, C559
pulmonary vascular response, awake state (sheep), H434
superoxide dismutase and, necrotizing enterocolitis, G556
- Platelet-derived growth factor
mesangial cells, F674
proteins, renal epithelial cells (monkey), F800
pulmonary hypertension and, H1165
- Platelets
activation, epinephrine effects, H1276
cytoplasmic magnesium concentration, H855
- Plethysmography
radioculide, venous volume and tone, forearm, H947
strain-gauge, sympathetic tone and vascular resistance, limb, H937
- Pleural effusions, formation, superior vena caval pressure elevation effects (sheep), H492
- Pleural space, albumin reabsorption kinetics, H375
- Pneumocytes, type II, permeability, neurophil cathepsin C and, C603
- Pneumectomy
compensatory lung growth after, collagen synthesis and degradation, C754
lung growth after, perioperative hypoxemia effects, E65
- Poiseuille's law, effective diameter, local vascular resistance and vasomotion, H1240
- Polarity, epithelial, reversal, collecting duct chloride transport, F220
- Polarization marker, sodium-sugar cotransport system, organization of epithelial membrane, C745
- Polyamines, gastric mucosal, gastrin effects, G305
- Polyclonal antibodies, against sodium channel protein, renal papilla, C835
- Polycythemia, hydration and, exercise-heat stress, R456
- Polyarginine, renal epithelial cells (monkey), F800
- Polyhydric alcohols, accumulation, during dehydration, renal inner medulla, F626

- Poly I:C: see Polyribonucleosinic:
polyribocytidylic acid
- Polymerorphism analysis, restriction frag-
ment-length, inborn errors, F1047
- Polypeptides: see also Peptides
pancreatic, role in exocrine pancreas se-
cretion, G535
vasoactive intestinal
desensitization, heart, H601
heart rate and, H311
hypotensive lower-body negative pres-
sure effects, R149
- Polyphosphoinositide, hydrolysis, G pro-
tein stimulation of, CCK and, pan-
creatic acinar cells, E652
- Polyribonucleosinic-polyribocytidylic acid, en-
hancement of slow-wave sleep, R748
- Polysaccharides, viscous, postprandial je-
junal motor activity, G800
- Portal vein
chronic cannulation, new method, G191
excitatory cholinergic innervation, H288
hemodynamics, continuous monitoring,
G194
- Posture, head-up tilt, renin and vasopres-
sin release, ANP inhibition, R368
- Potassium
ammonium absorption and, thick as-
cending limb, F78
brain and CSF composition, long-term
anoxia effects, diving (turtle), R338
conductance
apical membrane, gallbladder (guinea
pig), C808
enteric neurons, G603
depletion
alkalosis, F763
antihypertensive effects in renovascu-
lar hypertension, H1181
protease effects on adenylate cyclase,
kidney, F1033
depolarization, renin release by neuronal
norepinephrine, F614
diffusion, inside-out patch-clamp record-
ing, H980
double-barreled selective microelec-
trodes, dibenzo-18-crown-6, C408
evoked potential activity, anoxia and,
brain (turtle), R478
excretion
ANF release, hypophysectomy, R534
ANP and, kidney, F907
ANP and volume expansion, F66
vasopressin change effects, R940
external, calcium response of single ad-
renal glomerulosa cells, E488
low external, sodium-potassium-ATPase
mRNAs in response to, C252
peritubular, increase, potassium trans-
port through cortical collecting tu-
bules and, F108
permeability, passive, anions and, red
blood cells (sheep), C331
regulation, aldosterone role in, F811
secretion
electrolyte transport and, distal colon,
G329
endolymph production and, semicircu-
lar canal (shark), F711
subcellular electrolyte shifts, myocardial
ischemia and reperfusion, H917
transport
adaptation to sodium delivery and,
distal nephron, F1269
membrane potentials and, parotid
acini, C508
oxytocin effects, skin epithelium
(frog), C357
red cell ghosts, C346
zymogen granules, pancreatic and pa-
rotyd, C705
vascular reactivity and, saphenous vein,
H860
- Potassium channel
ATP regulated, inside-out patch-clamp
recording, H980
ATP-sensitive, hypertrophied ventricu-
lar myocytes, H1254
calcium-activated
cAMP modulation of, aortic smooth
muscle cells, H754
smooth muscle cells, aortic media,
H410
gene transfer, C12
- Potassium chloride, oxygen consumption
and, arrested heart, H807
- Potassium currents
single-channel and whole-cell, patch-
clamp study, pancreatic acinar cells
(guinea pig), G275
whole-cell, single early distal tubule cells
(frog), F699
- Potassium-rubidium fluxes, ouabain-resis-
tant, volume and anion dependency,
erythrocytes (sheep), C331
- Potentials
action, slow-response, reperfusion and,
H992
electrical, renal cell volume regulation,
F529
end-plate, soleus axon, insulin effects,
C60
evoked
activity, anoxia and, brain (turtle),
R478
jugular venous pressure effects, H1516
inhibitory junction, lower esophageal
sphincter, G441
intracellular, oxytocin effects, skin epi-
thelium (frog), C357
intracellular pH and, skin (frog), F922
membrane
electrical slow waves and, proximal co-
lon, C828
force staircase and intracellular so-
dium, heart (guinea pig), C798
glutathione efflux and, hepatocytes,
G403
hepatic efflux of glutathione, G547
leukotriene C₄ effects, taenia coli
(guinea pig), C433
liver, sex differences, G822
organic cation transport, proximal tu-
bules (flounder), R492
parotid acini, C508
potassium conductance, gallbladder
epithelial cells (guinea pig), C808
sodium-coupled sugar transport
(chicken), C486
succinate effects, proximal tubule,
F1170
orthodromic field, anoxia, brain (turtle),
R485
- PP: see Polypeptides, pancreatic
- Prazosin
adrenergic-histaminergic interactions,
neural, hindpaw, H426
 α -adrenoceptors and, microvascular
smooth muscle, H121
catecholamine-stimulated acid secretion
and, jejunum, G640
dopamine, renal blood flow and, R379
vasoconstriction and, coronary artery
(calf), H1452
- Preglomerular vessels, renal, angiotensin II
receptors in, E16
- Pregnancy: see also Fetus; Lactation;
Placenta
lactation and, effects on sodium appetite,
R1020
- preglomerular vessels, angiotensin II re-
ceptors in, kidney, E16
rauwolscine binding, myometrial α_2 -
adrenoceptors (guinea pig), E272
- Pressor responses
dorsal or ventrolateral medulla, R709
paraventricular nucleus lesion effects,
R882
sympathetically mediated, parabrachial
neuron stimulation and, H1349
- Pressor systems, support of arterial blood
pressure, awake state, H483
- Pressure: see also Blood pressure
aortic, Windkessel model, H742
arterial
after chloralose (lamb), H419
central control, angiotensin receptors
and, H1011
control, after chronic carotid sinus de-
nervation, H910
neurogenic and humoral factors,
awake state, R693
paraventricular nucleus lesion effects,
R882
vascular volume expansion and
(sheep), R846
zero-flow, carotid sinus baroreceptor
control, H1305
- capillary
blood flow and, control during perfu-
sion pressure, wing (bat), H1114
lipid absorption, intestinal, G690
pulmonary, lung, H1075
carbon dioxide partial, renal cortex,
F349, F361
carotid sinus, plasma vasopressin and,
H1199
central venous, ANF effects, H685
cerebral microvascular, arginine vaso-
pressin effects, H70
endothelium-dependent contraction, ca-
rotid arteries, H783
gastric, on-line computer analysis, G794
hydrostatic
proximal tubules (salamander), F188
renal cell volume regulation, F529
interstitial fluid, negative, acute post-
burn edema, H1069
interstitial hydrostatic, renal, hyperten-
sion, R756
- intracranial
elastic parameters, brain, R799
jugular venous pressure effects, H1516
intragastric, cholecystokinin effects,
G242
intraluminal, coronary arterioles (pig),
H1554
intramyocardial, coronary flow and,
model, H664
jugular venous, cerebral autoregulation
and, H1516
left atrial, alteration effects on pulmo-
nary vascular pressure-flow rela-
tions, H19
left ventricular, rate of development,
early sepsis, H699
lower-body negative, hypotensive, vagal
activity during, R149

- lymphatic, catecholamines, carotid occlusion, or hemorrhage effects, H514
- mean arterial, vasopressin infusion effects, awake state, R665
- microvascular
 - control during perfusion pressure, wing (bat), H1114
 - lymph flow during, H1149
- oxygen partial, blood sample-transfusion protocol evaluation, R851
- pericardial, regional variation, ventricular, H1370
- pyloric, waves and tones, topography and measurement, G490
- renal artery, sodium excretion during vasodilation and, F828
- sinus, pulsatile changes, baroreflex responses and, awake state, H673
- stop-flow, peritubular infusion of angiotensin, F383
- superior vena cava, pleural effusion formation and (sheep), H492
- ventricular, vasopressin effects, H261
- Pressure-flow loop, area, energy storage by proximal arteries and, H1405
- Pressure-flow relations
 - baroreceptor control, carotid sinus, H1305
 - coronary, changes, transition from blood to Tyrode perfusion, H476
 - nutritional capacity and, coronary veins, H834
 - pulmonary vascular, altered left atrial pressure effects, H19
 - systemic, autoregulation, awake state, H44
- Pressure-thickness relations, left ventricular systolic wall, isochrones, H1136
- Pressure-volume relations
 - end-systolic
 - interrelation with pressure-wall thickness relations, model, H679
 - oxygen consumption and, left ventricular, H366
 - vascular, ACh measurement of, H690
- Proatrial natriuretic factor, secretion, ouabain effects, atrial cardiocytes, E383
- Progastrin, antral, release after a meal, G665
- Progestogen, oocyte meiosis induced by, GnRH effects (goldfish), R268
- Prolactin
 - binding proteins for, kidney cytosol, E293
 - lipid biosynthesis and, mammary gland explants, E567
 - lipid composition and, testes, E442
 - melatonin and, adults (hamster), R812, R823
 - secretion, BAY K 8644 stimulation, C633
- L-Proline, transport, sodium-dependent, intestinal brush-border membrane vesicles (eel), R648
- L-Propionylcarnitine, mechanical recovery during reflow and, heart (swine), H169
- Propranolol
 - acid secretion stimulation, jejunum, G640
 - adrenergic stimulation and, ANP release, E260
 - ANP release and, E437
 - chronotropic effects, heart rate, H311
 - maturation of responses, fetus (lamb), R794
 - plasma renin activity and, awake state, E793
 - serotonin responsiveness and, coronary arteries, H1032
- D-Propranolol, three-compartmental analysis effects, thyroid hormone kinetics, E80
- Propylthiouracil, circadian period and (hamster), R1
- Prostacyclin
 - excretion, during leg exercise, H15
 - histamine stimulation of, endothelial cells, C214
 - phospholipase C activation by, mesangial cells, F1059
 - pulmonary vascular response to PAF and, awake state (sheep), H434
- Prostaglandin E
 - characteristics, papillary collecting duct cells, F1160
 - dexamethasone effects, A6 epithelia, C661
- Prostaglandin E₁, vasodilatory therapy effects, pulmonary hypertension, model, H1232
- Prostaglandin E₂
 - α -adrenergic agonists and, AVP-dependent cAMP levels, renal tubules, F43
 - bicarbonate secretion stimulated by, duodenal, G470
 - epithelial cells, tracheal, C760
 - modulation, diluting power of thick limbs of Henle, F1145
 - protein kinase C effects, colonic cell line, G27
 - smooth muscle cell contraction and, colonic, G807
- Prostaglandin F_{2 α} , calcium influx induced by, adenosine effects, coronary artery, H1492
- Prostaglandins
 - amiloride and, ventricular reperfusion recovery, H608
 - ethanol vasoaction and, gastric submucosa, G731
 - histamine stimulation of, endothelial cells, C214
 - hypertension reversal and, one-kidney, one-clip hypertension, H717
 - hyperthermia, cerebral blood flow and (pig), H343
 - interleukin 1- α -induced fever and, R527
 - phospholipase C activation by, mesangial cells, F1059
 - physiological changes, during urethan anesthesia, R73
 - production, role in vasopressin action, histidine effects, bladder (toad), F685
 - pulmonary vasculature and, H1499
 - pump perfusion and, impairment of autoregulation, H280
 - synthesis, ADH action and, bladder (toad), F74
- Prostaglandin metabolites, immunization with, gastrointestinal ulceration and, G723
- Prostanoids
 - muscarinic regulation, pulmonary intravascular volume, H1219
 - serotonin responsiveness and, coronary arteries, H1032
- Protease
 - adenylate cyclase and, potassium-depleted kidney, F1033
 - inactivation of lipase, G476
- Protease inhibitors, gastric emptying and, G685
- Protein
 - angiotensin-binding, antiserum to, H1542
 - band 3, immunocytochemical localization, collecting duct, F115
 - binding, growth hormone and prolactin, kidney cytosol, E293
 - calcium-binding, role in active calcium transport, renal, F558
 - cAMP-binding, ADH effects, medullary tubules, F292
 - cationic, permeability and, type II pneumocytes, C603
 - clearance
 - during bacteremia after surgery (sheep), H1421
 - lymphatic, pulmonary embolism, H1075
 - cytosolic, kinetics during renal epithelial cell growth, F868
 - degradation, cardiac fibroblasts, C202
 - digestion, small intestine, neutral endopeptidase effects, G212
 - endothelium, albumin effects, H638
 - excretion, single-nephron, after renal ablation in nephrosis, F1243
 - guanine nucleotide-binding, cardiac calcium channels in lipid bilayers and, H722
 - heparin sulfate proteoglycan, content of glomerular epithelial cells, F590
 - integral membrane, myocardial sarcolemma in ischemia, H467
 - kinetics, leucine extraction effects, R303
 - labeled, axonal transport in motoneurons, exercise training and, C731
 - metabolism
 - insulin responsiveness of, bedrest, E548
 - proximal convoluted tubules, F520
 - noncollagen, compensatory lung growth and, C754
 - nucleotide synthesis and, glomerular, F647
 - phosphorylation, epinephrine and platelet activation, H1276
 - plasma
 - β -agonist effects, awake state, H592
 - concentrations, venous pressure and pleural effusions (sheep), H492
 - separation, cardiac, H659
 - serum, glomerular permselectivity to (trout), R418
 - short-term energy balance relations, E332
 - synthesis
 - efficiency in pressure overload cardiac hypertrophy, H325
 - glutamine concentration relations, muscle, E166
 - heart, β -adrenergic stimulation or hypoxia, E537
 - inhibition of circadian clock (hamster), R1055
 - microsomal inhibition, F265
 - organization of epithelial membrane, renal, C745
 - Tamm-Horsfall, crystal absorption and growth slowing, F1197
 - uncoupling
 - fasting-refeeding cycle effects, E120
 - GDP binding, E865
- Protein kinase, cAMP-binding, ADH effects, medullary tubules, F292

- Protein kinase C**
activation, prostaglandin E₂ response, colonic cell line, G27
ANP secretion and, cardiocytes, H405
caerulein effects, pancreatic acini, G33
calcium current and contractility, ventricular myocytes, H1173
cell uncoupling and, C699
inositol lipid turnover and, gastric parietal cells, G99
LH response to, gonadal steroid effects on, E314
phorbol diester activation, smooth muscle contraction, C719
R59022, neutrophil response and, C589
sodium-hydrogen exchanger, liver, G346
vasopressin effects, glomerular mesangial cell growth, F988
volume regulatory response, erythrocytes (skate), R982
- Proteinuria**
glomerular filtration rate and, feeding and aging effects, awake state, F250
nephrosis, renal ablation in, F1243
Proteoglycan, metabolism, glomerular epithelial cells, F590
- Proteolysis**
limited surface, granulocyte elastase interaction, H651
physiological hypercortisolemia effects, E366
- Proton, transport, intracellular pH, skin (frog), F922**
- Protoporphyrin, biliary excretion, bile acid hydroxylation effects, liver, G382**
- Proximal artery, energy storage by, pressure-flow loop area measurement and, H1405**
- Pseudohypoparathyroidism, 1,25-dihydroxyvitamin D synthesis in, E730**
PTH: see Parathyroid hormone
- Puberty**
ontogeny of anorexia, R908
skeletal growth and maturation, sex steroids and, E559
- Pulmonary artery**
forward diastolic flow in, right atrial contraction, heart (pig), H228
regionally variable, responses to C3a, H1227
stretch-induced contraction, H1391
- Pulmonary embolism, endothelial pore sizes in, H1075**
- Pulmonary hemodynamics, left atrial pressure effects, pressure-flow relations, H19**
- Pulmonary vasculature, intralipid changes, H1499**
- Pulmonary veins, muscarinic regulation, intravascular volume, H1219**
- Pump**
calcium ion, coronary artery, superoxide radical effects, C297
chloride, controversy, R677
plasmalemmal calcium ion, transport capacity (toad, pig), C226
sodium, regulation by hypothalamic factor, renal cells, F574
sodium-potassium
differentiation; proximal tubule, F552
force staircase, heart (guinea pig), C798
low external calcium effects, C252
peritubular potassium stimulation, F108
stimulation by insulin, E953
- Purine nucleotides**
binding, brown fat, E865
cycle, intranephron ammoniogenesis and, F1122
- Purinoceptors, influence, internal anal sphincter (opossum), G389**
- Purkinje fibers, contractility, sodium-calcium exchange in, C278**
- Puromycin aminonucleoside, effects on heparin sulfate proteoglycan protein content, glomerular epithelial cells, F590**
- Putrescine, compensatory renal growth and, F270**
- Pylorectomy**
CCK-8 effects on feeding and gastric emptying, R113
satiety action of CCK and, R1059
- Pyloric sphincter, pylorectomy, satiety action of CCK and, R1059**
- Pyloroplasty, CCK-8 effects on feeding and gastric emptying, R113**
- Pylorus**
inhibitory opioid receptors, G352
pressure waves and tones, topography and measurement, G490
- Pyramine maleate, adrenergic-histaminergic interactions, neural, hindpaw, H426**
- Pyroglutaryl-histidine, carrier-mediated transport, renal brush-border membrane vesicles, C822**
- Pyruvate, exercise at reduced blood flow, limb muscle, H1156**
- Pyruvate dehydrogenase, prolactin effects, mammary gland explants, E567**
- Pyruvate kinase, organ-specific control of glycolysis, anoxia (turtle), R774**

R

- Radioimmunoassay**
atrial distension, ANF release and, isolated heart, R232
liver, ontogenesis of epidermal growth factor, E28
secretin release, small intestine, G7
- Radioisotopes, flux measurements, methodological errors in, G696**
- Raphe nuclei, medullary, stimulation, sympathoexcitatory neurons and, R605**
- Rauwolscline**
binding to adrenoceptors, pregnancy and (guinea pig), E272
vasoconstriction and, coronary artery (calf), H1452
- Receptors**
 α_2 , mediation of catecholamine-stimulated acid secretion, jejunum, G640
adenosine
calcium mobilization, cortical collecting tubule cells, C581
renal vasoconstriction induced by, H885
adenosine and acetate, portal blood flow increase and, G417
adrenoceptors
ADH action, bladder (toad), F74
antagonism, regional hemodynamic responses, awake state, H813
biogenic amines in acute hypoxia, H329
central and peripheral, blockade, exercise and, R547
- rauwolescline binding to, pregnancy (guinea pig), E272**
temperature regulation and (goldfish), R600
tracheal epithelial cells, C760
- α -adrenoceptors**
inotropic sensitivity, early sepsis, H699
vasoconstriction and, finger skin, H1000
- α_1 -adrenoceptor, bicarbonate excretion and, urinary, F1116**
- α_2 -adrenoceptors**
GABA regulation, urinary bladder (guinea pig), R888
local tissue cooling effects, H121
- β -adrenoceptors**
maturation of responses in fetus (lamb), R794
* resistance to phosphaturic effect of PTH, R557
subtypes, glucocorticoid modulation of, brown fat, E153
 α_1 - and α_2 -, chloride transport and, corneal epithelium (frog), C724
- ANF**
cGMP response, spontaneous hypertension, muscle cells, C573
glomerular, during rehydration, F621
angiotensin, subretrofacial nucleus, H1011
angiotensin II
DOCA-salt hypertension, brain nuclei, H646
renal preglomerular vessels, E16
ANP, inner medullary collecting duct cells, F324
ATP, phospholipase and, GTP γ S loading of endothelial cells, C667
atrial, natriuresis, plasma atriopeptin and, R259
- baroreceptors**
arterial, serotonergic mechanisms during hemorrhage, H496
arterial, vasopressin and carotid sinus pressure, H1199
carotid sinus, control of splanchnic resistance, H1305
carotid sinus denervation, H910
regulation of nerve activity, training effects, H974
- CCK**
after pyloroplasty or pylorectomy, R113
gallbladder, labeling using probes, G573
gallbladder muscle and pancreatic acinar cells, G512
chemoreceptors, carotid stimulation, coronary dilation and, H1330
cognate, expression of vasopressin and oxytocin, F207
- dopamine**
ANF effects, and renal, F494
identified by ¹²⁵I-Sch 23982, kidney, F970
E. coli enterotoxin, kidney (opossum), F1040
histamine, gastric emptying and (monkey), G767
- insulin**
renal cortical epithelium, E357
second messenger for, C1
thermogenic agent effects, obesity, E101

- insulin-like growth factor I, renal glomeruli and tubules, E504
 leukotriene, transmembrane signaling, mesangial cells, C771
 mechanoreceptors
 cardiopulmonary, gastric bicarbonate secretion and, G752
 vagal gastric, CCK effects, G55
 muscarinic
 functional G₁ protein, heart cells, C51
 lower esophageal sphincter, G441
 neurokinin, effects on antral muscle, G779
 nuclear steroid, sodium transport stimulation, A6 cells, F736
 opioid, inhibitory, pylorus, G352
 osmoreceptors, intestinal myoelectric activity, G12
 serotonin, localization, myenteric and submucosal neurons, G603
 somatostatin, pancreatic acinar cell line, G113
 somatotrophin, kidney cytosol, E293
 substance P, desensitization of inositol trisphosphate formation, parotid gland, C149
 transferrin-iron, erythron, R326
 vasopressin
 cardiac effects of vasopressin and, H261
 renal hypertension, H693
 VIP, desensitization, heart, H601
 Rectal gland, neural control (shark), R212
 Red blood cells: *see* Erythrocytes
 Reepithelialization, after acute mucosal injury, colon, G62
 Reflexes
 activation of sympathetic nervous system, ANF and, H685
 baroreflex
 angiotensin receptors, subretrofacial nucleus, H1011
 arterial pressure and, awake state, R693
 cardiac, differentiation, R654
 cardiac output measurement with Doppler flow probes, H1206
 carotid sinus denervation, H910
 opiate modulation of, H987
 regulation of nerve activity, training effects, H974
 sensitivity to vasopressin during estrous cycle, R1041
 summation, H1244
 sustained response, sinus pressure effects, awake state, H673
 cardiac
 hypotensive lower-body negative pressure effects, R149
 natriuresis, plasma atriopeptin and, R259
 cardiac afferent sympathetic, ischemia effects, H26
 cardiovascular
 after chloralose (lamb), H419
 pentobarbital anesthesia effects, H569
 physiological enteric stimulation, G319
 chemoreceptor, carotid, sympathectomy and deafferentation, R252
 chemoreflexes, carotid stimulation, coronary dilation and, H1330
 pulmonary inflation, coronary circulation and, H866
 renal, intrarenal bradykinin effects, R994
 sympathetic activation, gastric bicarbonate secretion, G752
 vagal
 ischemia effects, H26
 nonadrenergic noncholinergic, blood flow, awake state, G522
 Refractory period, effective, hysteresis in, ventricular myocardium, H1342
 Regulatory cell volume decrease, principal and intercalated cells, cortical collecting tubule, C612
 Rehydration
 dehydration and, maternal (sheep), E674
 glomerular ANF receptors during, F621
 Renal artery
 constriction, metabolic clearance of ANP, E934
 pressure: *see* Pressure
 responses to angiotensin II, antiserum to angiotensin-binding protein, H1542
 Renal nerve
 angiotensin II interactions, during sodium deprivation, F823
 innervation, thick ascending limb of Henle, F340
 sympathetic, ANF effects, R6
 volume expansion and, awake state (monkey), R388
 Renin
 adrenergic control, euhydration and water deprivation, awake state, E793
 biosynthesis, F563
 blood, evaluation of sample, R851
 captopril and, renal function, diabetic adults, F755
 granules, renal, Triton WR-1339 in, E353
 hypoxia, awake state (sheep), R274
 intrarenal inhibition, renal function and, F749
 intravenous endothelin effects, awake state, R1064
 modulation of intrarenal effects, ANP and, F545
 multiple forms, adrenal gland, E531
 natriuresis, atrial stretch and, R259
 plasma activity, ANH hormone effects, sodium depletion, R867
 postural release, ANP effects, R368
 release
 cGMP and, F474
 neuronally released norepinephrine and, F614
 renal, hepatic clearance of, glycosylation for, E642
 secretion
 maternal cortisol secretion effects, fetus (sheep), R412
 osmotic forces and, F1
 secretory mechanisms, two pathways, F100
 thirst mechanisms, R217
 Renin-angiotensin system
 awake state, H813
 hypotension and, mature and immature fetus (lamb), R67
 kidney function and, F749
 local control of blood flow, mesenteric, G267
 maturation, fetus (lamb), R794
 mean arterial blood pressure and, awake state, H483
 molecular biology of, F563
 regional hemodynamic responses to adrenoceptor antagonism and H813
 response, relief of ureteral obstruction, neonatal (guinea pig), F1070
 two pathways, renin secretory mechanisms, F100
 Reoxygenation, hypoxia and, early left ventricular filling, H1311
 Resistance
 coronary, changes in pressure-flow relations, H476
 electrical, oxidants and epithelial permeability, C781
 endothelial, albumin effects, H638
 fractional, apical membrane potassium conductance, gallbladder (guinea pig), C808
 input, electrical coupling, colonic smooth muscle, C653
 insulin, muscle, obesity and, E374
 membrane, distal tubules (amphibian), F158
 pulmonary vascular, altered left atrial pressure and, H19
 renal vascular, kinins and, F408
 segmental, cerebral circulation, H70
 splanchnic, carotid sinus baroreceptor control of, H1305
 vascular
 adrenoceptors and hemodynamics, awake state, H813
 ANP or captopril effects, R737
 during β -adrenergic blockade, H77
 effective diameter, vasomotion and, H1240
 limb, sympathetic tone effects, H937
 mental stress, calf, H1443
 minimum, dehydration and, hindlimb (baboon), H266
 oxygen consumption, tension, and carbon dioxide tension relations, H1004
 portal blood flow, ethanol-induced increase, G417
 ureteral obstruction, renin-angiotensin system and, neonate (guinea pig), F1070
 vasopressin and, during dehydration, awake state, R46
 Respiration
 cardiac, activation of dehydrogenase activity and, H185
 cytosolic free calcium and, respiratory rate relations, myocytes, H347
 mitochondrial
 liver and heart, high altitude, C123
 microsomal protein synthesis inhibition, F265
 renal, succinate effects, proximal tubule, F1170
 Respiratory pattern, timing and, sympathectomy and deafferentation, R252
 Rhabdomyolysis, hydroxyl radical role in, F438
 Rheology, oxygen transport and, functional hyperemia (hamster), H236
 Rhythms
 activity, melatonin entrainment, female, R237
 biological, inhibitor of protein synthesis phase shifts (hamster), R1055
 circadian
 entrainment by prenatal maternal melatonin injections (hamster), R439
 insulin sensitivity and, muscle, E41
 melatonin and suprachiasmatic nucleus, R332
 muramyl-dipeptide and, R157
 propylthiouracil effects (hamster), R1

Ribonucleic acid
content, pressure overload cardiac hypertrophy, H325
double-stranded, enhancement of slow-wave sleep, R748
messenger
hepatic epidermal growth factor, E28
renin, angiotensinogen, and ANP, sodium balance effects, E129
sodium-potassium-ATPase, low external potassium effects, C252
poly(A), sodium-calcium exchange activity, oocytes (toad), C870

Rubidium
efflux, calcium influx and, aortic endothelial cells, H219
uptake, dopamine effects, cortical tubule cells, F666

Ruthenium red
myocardial respiratory control, H185
responses of contractile function, heart (frog), H1413

S

Saccharides, spatial map, tongue, R117
Saline
intake, vasopressin and, during dehydration (pig), R249
loading
ANP response, essential hypertension, F1085
atrial resection and, awake state, H144

Salt
absorption, bumetanide effects, intestine (flounder), C246
adaptation, ANF and (fish), F1281
luminal concentration, diluting power of thick limbs of Henle, F1145
spatial map, tongue, R117

Salt gland, blood flow and secretion from, VIP effects (duck), R575

Saphenous vein, reactivity, sodium content relations, H860

Saralasin
intrarenal angiotensin, tubuloglomerular feedback and, F383
responses to angiotensin II and, renal artery, H1542

Sarcoplasmic reticulum
cellular compartmentation, ischemic myocardium, H929
increased phospholipid N-methylation, skeletal muscle, diabetes and, E347
subcellular electrolyte shifts, myocardial ischemia and reperfusion, H917

Satiety
CCK action
neonate, R14
pylorectomy effects, R1059
endogenous sugar acid effects, ventromedial hypothalamic neurons and, R134
fat and, diabetes, R123
gastric emptying and, CCK-8-induced changes, R21
low-dose bombesin effects on food intake, fourth ventricle, R988
postgastric controls, feeding behavior, preweanlings, R191

Saxitoxin, ³H-labeled, marker for deep muscular plexus neurons, G462

SCH 23390
autoregulation, renal blood flow, R379
dopamine receptors identified with, kidney, F970

Sciatic nerve
axonal protein transport, exercise training and, C731
stimulation, ¹⁴C-butanol measurement of, H953

Scintigraphy, colonic transit, G529
Seawater, catecholamine release, acidotic stress and (trout), R395

Secretin, secretion, gastrinoma cells, G596
Secretagogue, LH release induced by, calmodulin antagonist effects (calf), E59

Secretory protein I, synthesis and secretion, calcium effects, E299
Seizures, sympathetic regulation, cerebral blood flow, newborn (lamb), H563

Semicircular canals, endolymph secretion (shark), F711

Sepsis
inotropic sensitivity to β -adrenergic stimulation, H699
interleukin 1, tumor necrosis factor and, energy metabolism, E760
myocardial metabolism and coronary flow with, H1295
pituitary-adrenal response, during growth, E525

Serotonergic mechanisms, renal sympathoinhibition and, during severe hemorrhage, H496

Serotonin
antigen exposure and, jejunal smooth muscle, G701
coronary artery constriction, flow-mediated attenuation, H1317
differential localization of receptors, myenteric and submucosal neurons, G603
ischemia and reperfusion, cerebral artery response, H879
permeability, cyclooxygenase inhibition and, lung, H1096
responsiveness, coronary arteries, H1032

Sex differences
androgenic influences, body size and composition (monkey), E857
estrous cycle, vasopressin in, R1041
membrane potential, liver, G822

Sex steroids
bone density and, during growth, E416
suppression of growth, skeletal, E559

Shock
defibrillation, unsuccessful, epicardial activation after, H902

Endotoxic
naloxone and circulatory changes during, awake state, H1106
organ blood flow, naloxone and ibuprofen effects (pig), H177
endotoxin, glucose metabolism, adrenergic blockade effects, E629
glutathione metabolism and, hepatocytes, E801
heat, myocardial translation-inhibiting peptide, H1024
timing and strength of, induction of ventricular arrhythmias, H891

Short bowel syndrome, membrane transport, after bowel resection, G292
Sialic acid, insulin action and, diabetes mellitus, E173

Sinoaortic denervation, vasopressin and catecholamines in, central, R768
Sinoatrial node, vagal preganglionic somata control of, localization, R703

Sinus node
baroreflex modulation, heart rate and atrial activation, H503
supersensitivity to ACh, after parasympathetic denervation, H534

Skin
cold-induced vasoconstriction, α -adrenoceptors and, finger, H1000
intracellular pH, sodium ions, volume, and cAMP effects (frog), F126
muscles and, albumin flux and volume flow in, H458
principle cells, pH in (frog), F922, F930
urea transport (toad), F429

Skin epithelium, oxytocin effects, cation content and electrophysiology (frog), C357

Sleep
activation of paratrigeminal nucleus, entrance to hibernation (squirrel), R178
enhancement, growth hormone-releasing factor and, R310
fever, muramyl-dipeptide-induced, R157
MSH and interleukin interactions and, R914
non-rapid eye movement, EEG analysis, R27
REM and NREM, neuronal activity during (squirrel), R1008
slow-wave, polyribonucleic-polyribocytidylic acid enhancement, R748

Slow-wave activity, EEG, NREM sleep, R27

Sodium
absorption, sugar-stimulated, vertebrates and invertebrates, R583
ANP-mediated excretion, renal ablation, F1091
appetite
angiotensin-related, thirst and (cow), R205
pregnancy and lactation effects, R1020

balance
 β -agonist effects, awake state, H592
renin, angiotensinogen and ANP mRNA levels, E129
brain and CSF composition, long-term anoxia effects, diving (turtle), R338
content, saphenous vein reactivity and, H860
deficiency, voluntary sodium intake and, R1025
delivery, distal tubule and collecting duct adaptation to, F1256, F1269

depletion
ANH effects on renal function and aldosterone secretion in, R867
electrolyte transport and, distal colon, G329

deprivation, angiotensin II and renal nerve interactions during, F823

excretion
ANF release, hypophysectomy, R534
ANP and, kidney, F907
ANP and volume expansion, F66
atrial resection and, awake state, H144
cardiorenal endocrine dynamics, hypothyroidism, R61
during atrial distension, R259
during renal vasodilation, renal artery pressure effects, F828
NE-ACTH hypertension and, R894
renal, intrarenal adenosine effects, F1230
vasopressin change effects, R940

extracellular, intracellular pH and, skin (frog), F930

flux

- intracellular, ischemic skeletal muscle, C377
- sodium-potassium-ATPase-dependent, cortical collecting tubules, F605

influx, bumetanide-sensitive, medullary vesicles, F1138

intake, gene expression and, ANF, H245

intracellular

- positive force-frequency staircase, papillary muscle (guinea pig), C798
- transport, vasopressin effects, bladder cells (toad), F1015
- water flow and, proximal tubules (salamander), F188

intrarenal effects of ANP, angiotensin II modulation of, F545

lidocaine and, recovery kinetics (frog), H1558

luteinizing hormone release and, pituitary (calf), E469

p-aminohippurate transport and, renal basolateral membrane vesicles, F597

paracellular pathway, cortical collecting duct, F720

potassium and chloride balance, citrate and bicarbonate excretion, acid-base balance, F182

potassium regulation, aldosterone role in, F811

L-proline transport dependent on, intestinal brush-border membrane vesicles (eel), R648

reabsorption, intrarenal volume expansion and proximal, F1178

restriction, angiotensin antagonism and ACE inhibition, F944

subcellular electrolyte shifts, myocardial ischemia and reperfusion, H917

succinate transport and metabolism with, intestine, C95

sugar transport, intestine (chicken), C486

transport

- active, buccal mucosa, G286
- adaptation to sodium delivery and, distal nephron, F1269
- dopamine effects, cortical tubule cells, F666
- IGF1 stimulation of, renal (toad), C413
- jejunal brush-border membrane vesicles, G206
- oxytocin effects, skin epithelium (frog), C357
- papillary collecting duct cells, F331, F1160
- renal, cytosolic calcium regulation and, F787
- urinary, ANF and dopamine receptor effects, renal, F494
- voluntary intake, sodium deficiency effects, R1025

Sodium-ammonium-chloride, potassium effects, thick ascending limb, F78

Sodium-calcium exchange

- bradykinin and, aortic endothelial cells, H219
- contractile force and, cardiac Purkinje fibers, C278
- myocyte deenergization and, C162
- positive force-frequency staircase, papillary muscle (guinea pig), C798

regulation, proximal tubules, F787

respiratory rate relations, myocytes, H347

sarcolemmal, cardiac, oocytes (toad), C870

sarcolemmal membrane vesicles, mesenteric artery, C323

Sodium channel

- epithelial antibodies, renal papilla, C835
- fast inward current, embryonic heart (chick), H540

Sodium chloride

- absorption

 - proximal, F434
 - sodium-hydrogen antiport role in, proximal tubule, F461

- high, survey of osmolytes, renal cell lines, C181
- hormone effects on, medullary collecting duct, F421
- hypertonic, thirst mechanisms, R217
- intake

 - hydrogen homeostasis, osmolality, and body temperature during, R97
 - regulation of carbon dioxide ventilation and, R105

- taste response

 - after amiloride, R1002
 - strain differences, R424

- taste transduction, tongue, R117
- transport, passive, urinary bladder (flounder), F229

Sodium chloride absorption, electroneutral, sodium repletion and, distal colon, G329

Sodium dodecyl sulfate-polyacrylamide gel, electrophoresis, ANP collecting duct receptors, F324

Sodium-glycine cotransport, canalicular liver plasma membrane vesicles, G253

Sodium-hydrogen antiport

- activity, renal, acidemia effects, F237
- intracellular pH and, skin (frog), F126
- sodium-chloride absorption and, proximal tubule, F461

Sodium-hydrogen exchange

- amiloride and, postischemic ventricular recovery, H608
- cell death in hepatocytes, extracellular acidosis effects, C315
- cellular pH and, lens epithelium (toad), C595
- intracellular pH and, skin (frog), F930, F922
- LLC-PK₁ mutant, sensitivity to amiloride, C495
- mesangial cells, glomerular, C844, C857
- modulation of activity, IMCD cells, F331
- norepinephrine effects, intestine, G18
- regulatory volume increase and, separate control, renal cells (opossum), C76
- renal, metabolic acidosis in senescence, F1183
- sodium-potassium pump modulated by, proximal tubules, F552

Sodium-inorganic phosphate cotransport, modulation by extracellular phosphate, kidney cells (opossum), C155

Sodium ions

- absorption, apical membrane, inner medullary collecting duct, F278
- intracellular activity, cardiac Purkinje fibers, C278
- intracellular pH and, skin (frog), F126

Sodium-lactate cotransport, apical membranes, LLC-PK₁ cells, F1249

Sodium nitroprusside

- independent blockade, cerebral vasodilation, H847
- mature and immature fetus (lamb), R67

Sodium-phosphate-ATPase, uptake, endocytosis, atria (guinea pig), C479

Sodium-potassium-ATPase

- activity, dopamine inhibition of, cortical tubule cells, F666
- endogenous, regulation of sodium pump, renal cells, F574
- high-ouabain-affinity isoform, thyroid hormone, E912
- sodium flux dependent on, cortical collecting tubule, F605
- sodium-potassium pump modulated by, proximal tubules, F552
- succinate effects, proximal tubule, F1170
- valinomycin stimulation, gastric acid formation, G313

Sodium-potassium-chloride, cotransport, active ammonium absorption, thick ascending limb, F57, F78

Sodium-potassium-chloride cotransport

- bumetanide effects, intestine (flounder), C246
- pathways, fibroblasts, C112
- reduced, hypertension and, vascular smooth muscle cells, C169
- regulatory volume increase and, renal cells (opossum), C76

Sodium-potassium exchange

- independent stimulation, insulin, E953
- thyroid hormone effects, skeletal muscle, E604

Sodium-potassium pump: *see* Pump

Sodium-proton exchanger, hepatocytes, G346

Sodium-sugar cotransport, polarization marker, organization of epithelial membrane, C745

Soleus muscle

- axon function, glucose transport, insulin effects, C60
- insulin sensitivity, circadian rhythm and, E41
- motor units, electromechanical and metabolic properties, C684
- sodium-potassium transport, thyroid hormone effects, E604

Solutes

- excretion, ANP-mediated, renal ablation, F1091
- inner medullary concentration, ureteral excision effects, F1225
- organic, renal brush-border membrane transport (snake), R52
- transfer, across blood-nerve barrier, compartmental analysis, R317

Somata, brain stem, controlling cardiac nodes, R703

Somatostatin, gene expression, muscle, E513

Somatostatin

- cholinergic inhibition of, D-cells, G424
- GHRF causes biphasic stimulation, hypothalamic cells, E829
- glucose and, glucose kinetics, fetus (sheep), E87
- immunoneutralization, gastric acid secretion and, G40
- neural control, rectal gland (shark), R212
- receptors: *see* Receptors

Somatostatin (*continued*)
 release, calcium and bombesin in, stomach, G627
 secretion
 gastrinoma cells, G596
 nonadrenergic sympathetic neural influences, E785
 Somatotropin, stimulation, 3-O-methylglucose transport, E723
 Sonomicrometry, myocardial dysfunction, after acute ischemic injury, H85
 Sorbitol
 accumulation, during dehydration, renal inner medulla, F626
 survey, renal cell lines, C181
 Soya flour, pancreas resection, growth after, G670
 Soybean trypsin inhibitor, ornithine decarboxylase gene expression and, pancreatic, G818
 Spaceflight, short, bone changes after weightlessness, R243
 Spectrometry, fluorescent, sodium-hydrogen antiporter activity, F237
 Spectroscopy
 electron-spin resonance, superoxide demonstration by, H213
 NMR
 ischemic skeletal muscle, C377
 organic osmolytes, renal inner medulla, F626
 Spermidine, compensatory renal growth and, F270
 Spermine, compensatory renal growth and, F270
 Sphincter of Oddi, control mechanisms, contraction rate (opossum), G619
 Spinal cord, blood flow: *see* Blood flow
 Spine, transection, soleus motor units, C684
 Spinoreticular cell, response, intrarenal bradykinin, R994
 Spironolactone
 glucocorticoid-induced cation transport and, colon, F1235
 sodium transport and, A6 cells, F736
 Splanchnic nerve
 stimulation, bicarbonate secretion and, duodenum, G709
 unequal bulbospinal influences on, R946
 Squamous epithelium, developing, blastocyst transport functions, embryo, C419
 SRIF: *see* Somatostatin
 SR: *see* Sarcoplasmic reticulum
 Starch
 energy balance and, adrenalectomized obese mice, R141
 intragastic infusions, conditioned flavor preference, R672
 Starvation: *see* Fasting
 Steroid hormones
 GnRH sensitivity, underfeeding and, prepubertal females, E482
 gonadal, LH response to arachidonic acid and protein kinase C, E314
 inhibition, ACTH, E241
 plasma protein-mediated transport, E221
 transport, plasma protein-mediated, E403
 Steroidogenesis, adrenal, vasopressin effects, R806
 Stimulus-secretion coupling: *see* Coupling
 Stomach: *see also* entries under Gastric CCK effects, satiety, R14

ethanol vasoaction in, arachidonic acid metabolite effects, G731
 gastrin release, after a meal, G665
 Streptozotocin
 diabetes, intestinal hyperemia associated with, glucagon role in, G542
 neuroeffector system, vascular α -adrenergic, H1036
 Stress
 acidotic, catecholamine release and (trout), R395
 active tangential, intramural lymphostasis and, H1289
 borderline hypertension, cardiovascular and renal responses, R431
 glutathione metabolism and, hepatocytes, E801
 hypoxic, granulocytes and xanthine oxidase in, H1269
 inhibition of ACTH, corticosteroids and, R344
 mental, cardiovascular and sympathoadrenal responses, H1443
 metallothionein response to, E518
 oxidative, MDA content and, skeletal muscle, C874
 psychoneurogenic, corticosterone-releasing effects and, R839
 Stroke, brain capillaries, microvascular morphometry during, H623
 Strontium, cross-bridge phosphorylation and, smooth muscle (pig), C401
 Subretrofacial nucleus, angiotensin receptors in, H1011
 Substance P
 effects on antral muscle, G779
 receptors: *see* Receptors
 responses and mechanics, proximal and distal colon, G787
 Substrates
 cycle, DHEA and, obesity, E1
 exchange, reduced blood flow and, limb muscle during exercise, H1156
 homeostasis, insulin secretion and, prolonged hypothermia, R1035
 mobilization, regulation during exercise, R400
 renin, thirst mechanisms, R217
 specificity, cellular ATP and, nephron, F977
 tracer methodology, E94
 Succinate
 respiration, membrane potential, and potassium, proximal tubule, F1170
 transport and metabolism, sodium effects, intestine, C95
 Succinate dehydrogenase, tibialis anterior motor units, C43
 Sucrose
 biliary permeability, hormonal regulation of, G454
 taste transduction, tongue, R117
 Sucrose gradient, sodium-calcium exchange activity, cardiac sarcolemma (toad), C870
 Sucrose-insulin, ^{14}C -labeled, uptake and intracellular fate, liver, C70
 Sugar
 ion absorption stimulated by, vertebrates and invertebrates, R583
 transport, sodium-coupled, intestine (chicken), C486
 Sugar acid, endogenous, ventromedial hypothalamic neurons and, R134
 Sulfobromophthalein, biliary secretion, lipid particles and, G745

Superoxide, electron-spin resonance spectroscopy, H213
 Superoxide anion
 granulocytes and, ischemia-reperfusion injury, H1269
 papillary muscle tension and, H138
 postischemic generation of, brain, newborn, H401
 Superoxide dismutase, eicosanoid release and, necrotizing enterocolitis, model, G556
 Superoxide radical, calcium ion pumps and, coronary artery, C297
 Suprachiasmatic nucleus
 circadian rhythm, prenatal entrainment, pup (hamster), R439
 2-deoxy-[1- ^{14}C]glucose uptake, melatonin effects, R332
 Supraoptic nucleus
 blood flow, during hypercapnia, R295
 vasopressin and catecholamines, chronic sinoaortic denervation effects, R768
 Sweat gland, epithelial cells, different physiological signatures, C102
 Sympathectomy, carotid, deafferentation and, R252
 Sympathetic activation, asynchrony, regional ventricular denervation, awake state, H358
 Sympathetic denervation, supersensitivity, ventricular recovery, H577
 Sympathetic nerves
 activity
 cold-enhanced pressor response, spontaneous hypertension, H1018
 exercise training effects, renal, H974
 food intake and starvation effects, R284
 cardiac activity, changes in coronary occlusion, H704
 cervical, sympathectomy and deafferentation, R252
 end, norepinephrine released by, renin release and, F614
 neurohumoral control, villous motility, G162
 nonadrenergic mediation of, basal pancreatic hormone secretion, E785
 reflex activation, gastric bicarbonate secretion, G752
 renal
 bicarbonate excretion and, urinary, F1116
 during sodium deprivation, F823
 Sympathetic nervous system
 adenosine and noradrenergic neurotransmission, H386
 arterial pressure and, awake state, R693
 asynchrony, regional ventricular denervation, awake state, H358
 augmentation of cardiac function by, early hypertension, awake state, H1525
 cold and diet effects, skeletal muscle, E180
 CRF effects, food intake and brown fat thermogenesis, E255
 deep hypoglycemia, glucoreceptors in carotid perfused tissue, E680
 endotoxin-induced fever and, E617
 reflex activation, ANF and, H685
 regulation
 cerebral blood flow, during seizures, newborn (lamb), H563
 contractile tissue, heart, H1050

neuropeptide Y release, pancreas (pig), G46
 splanchnic nerve stimulation, bicarbonate secretion and, duodenum, G709
 trophic changes in brown fat and, during cold acclimation, R874
 venomotor responses, central and local hypoxia, H760
 Sympathetic neural effects, nonadrenergic mediation of, basal pancreatic hormone secretion, E785
 Sympathetic stimulation, intestinal blood flow during, intramural distribution, H1091
 Sympathoadrenal responses, mental stress, H1443
 Sympathoexcitatory neurons, angiotensin receptors, binding and pressor effects, H1011
 Synaptosomes, muscular plexus, [³H]saxitoxin marker for, G462
 Synthese, DHEA treatment and, obesity, E1

T

Tachykinins, effects on antral muscle, G779
 Tachyphylaxis
 pulmonary artery responses, C3a, H1227
 spinoreticular cell response, intrarenal bradykinin, R994
 Taenia coli
 leukotriene C₄ effects, electromechanical activity and calcium intake (guinea pig), C433
 magnesium activation (guinea pig), C465
 Taste: see Feeding; Gustatory response
 Taurine, transport, renal basolateral membrane vesicles, F88
 Taurocholate
 bilirubin glucuronides and, hepatocyte cotransport, G121
 hydroxylated, protoporphyrin excretion and, liver, G382
 Tear film, chloride-bicarbonate antiport, lacrimal gland, G367
 TEA: see Tetraethylammonium
 Technetium-99m, venous volume and tone, forearm, H947
 Temperature
 acclimation
 acylation of lysophosphatidylcholine, liver (trout), R923
 time course, renal plasma membrane (trout), R622, R628
 ambient, muramyl-dipeptide and, R157
 environmental, norepinephrine turnover in iron deficiency, R90
 regulation
 adrenoceptors and (goldfish), R600
 exercise-heat stress, R456
 tissue cooling, α -adrenoceptors and microcirculation, H121
 water permeability and, endothelial cells (calf), C311
 Temperature, body
 brain
 MSH and interleukin interactions and, R914
 muramyl-dipeptide and, R157
 energy balance and, adrenalectomized obese mice, R141
 hydrogen homeostasis and osmolality, during sodium chloride and water intake, R97

insulin secretion, substrate homeostasis and, R1035
 physiological changes, during urethane anesthesia, R73
 Terbutaline, adrenergic-histaminergic interactions, neural, hindpaw, H426
 Testes
 plasma membrane, hormone effects, E442
 thyroid, circadian period and (hamster), R1
 Testosterone
 body size and composition and, adult (monkey), E857
 bone density and, during growth, E416
 LH response and, arachidonic acid and protein kinase C, E314
 Tetraethylammonium
 organic cation transport, potential-driven (flounder), R492
 transport, renal tubules (snake), F167
 Thalamus, posterior, neuronal activity during sleep (squirrel), R1008
 Thallium, blood flow distribution determined by, intrarenal, H1535
 Theophylline
 decreased secretion, aging and, colon, G72
 excretion, during leg exercise, H15
 glucose inhibition of insulin release, E422
 Thermal adaptation, time course of, plasma membrane, kidney (trout), R622, R628
 Thermal injury
 negative interstitial fluid pressure and, H1069
 splanchnic leucine extraction effects, protein kinetics, R303
 Thermogenesis
 brown fat
 CRF effects, E255
 nuclear T₃ receptors, E496
 cold and diet effects, skeletal muscle, E180
 GDP binding, brown fat, E865
 glucose-induced, thyroid hormones and, E146
 lateral hypothalamic lesions, E708
 norepinephrine turnover, iron deficiency, R90
 oxygen consumption and, forearm, E572
 trophic changes in brown fat, neural influences, R874
 Thermogenic agents, insulin receptors and, obesity, E101
 Thermogenin, insulin receptors and, obesity, E101
 Thermography, infrared, oscillating heat flow, pinna, R464
 Thermoregulation
 behavioral, adrenoceptors and (goldfish), R600
 blood volume and, exercise-heat stress, R456
 brown fat composition, fasting-refeeding cycle effects, E120
 fever, changes during urethane anesthesia, R73
 oscillating heat flow, pinna, R464
 Thiocyanate, glutathione efflux and, hepatocytes, G403
 Thirst: see Drinking
 Thoracic duct, albumin reabsorption kinetics, H375

Thrombin, histamine stimulation of, endothelial cells, C214
 Thrombocytopenia, pulmonary hypertension and, H1165
 Thromboxane, antagonism, cardioprotective actions in atherosclerosis, H318
 Thromboxane A₂
 metabolites, excretion during leg exercise, H15
 phospholipase C activation by, mesangial cells, F1059
 pulmonary vascular response to PAF and, awake state (sheep), H434
 synergistic effects, coronary flow and myocardial function, H153
 Thyroid
 circadian period and (hamster), R1
 status, white adipose tissue development and, E280
 Thyroidectomy
 circadian period and (hamster), R1
 kinins and, E411
 Thyroid hormones
 activation, cold exposure, brown fat, E496
 glucose metabolism and, E146
 iron deficiency and, environmental temperature effects, R90
 kinetics, three-compartmental analysis effects of D-propranolol, E80
 kinins and, E411
 plasma protein-mediated transport, E221
 sodium-potassium-ATPase, high-ouabain-affinity isoform of, E912
 sodium-potassium transport and, skeletal muscle, E604
 status, white adipose tissue development and, E280
 transport
 impaired, obesity and, E54
 plasma protein-mediated, E403
 treatment, myocardial infarction, H801
 Thyroparathyroidectomy
 exchangeable calcium and blood flow after, bone, H94
 phosphaturic action, foscarnet, F984
 Thyrotoxicosis, glucose intolerance in, role of insulin, glucagon, and epinephrine, E843
 Thyrotropin-releasing hormone, stimulation, prolactin release, C633
 Thyroxine
 conversion to triiodothyronine, cold exposure and, brown fat, E496
 kinetics, three-compartmental analysis effects of D-propranolol, E80
 uptake, liver, E110
 L-Thyroxine, treatment, myocardial infarction, H801
 Thyroxine 5'-deiodinase, trophic changes in brown fat, cold acclimation, R874
 Tibialis anterior muscle, metabolic and fiber size properties, C43
 Tongue, spatial map of salts and saccharides, R117
 Tracer techniques
 glucose kinetics, euglycemic clamp, E871
 substrates, model, E94
 Trachea
 epithelial cells, differentiated properties, C760
 response to neurotensin, ventral medulla, R780
 Transferrin, tissue, iron and, erythron, R326

Transforming growth factor, proteins,
renal epithelial cells (monkey), F800
Transplantation, skeletal muscle, vascular-
ized grafts, blood flow in, H1043
Transporters, amino acids, regulatory sig-
nals for, intestinal, G151
Treadmill: *see* Exercise
Trehalase, expression, after glucose starva-
tion, kidney cells (pig), C816
TRH: *see* Thyrotropin-releasing hormone
Triacylglycerol
orally fed, absorption and metabolism,
G612
secretion, flow rate and insulin effects,
liver, E306
Trichinella spiralis, antigen preparation, je-
junal smooth muscle contraction
and, G701
Trifluoperazine
calcium transport and, basolateral mem-
brane vesicles, small intestine, G482
gastrin and somatostatin release, stom-
ach, G627
Trigeminal complex, spinal, microinjection
of ANF, cardiovascular responses,
R182
Trigeminectomy, pial arteriolar re-
sponses, hypertension or norepi-
nephrine, H1
Trigeminal ganglia, trigeminectomy, pial
artery responses and, H1
Triglycerides, kinetics, carbohydrate feed-
ing and, E236
Triiodothyronine
kinetics, three-compartmental analysis
effects of D-propranolol, E80
metabolism, exercise regulation of, E824
Trimethylamines, accumulation, during de-
hydration, renal inner medulla, F626
Triton WR-1339, renin granules, renal,
E353
Trypsin
inactivation of lipase, G476
protease effects on adenylate cyclase,
F1033
Trypsin inhibitor, repeated treatment, exo-
crine pancreatic treatment, G236
Tubulin, nonrandom turnover, cardiac fi-
broblasts, C202
Tubuloglomerular feedback: *see* Feedback
Tumor necrosis factor
interleukin 1 and, energy metabolism,
E760
recombinant human, hormonal and met-
abolic responses, E206
TxA₂: *see* Thromboxane A₂
Tyrosine hydroxylase, activity, chronic si-
noaortic denervation effects, R768
Tyrosine kinase, activity, thermogenic
agent effects, obesity, E101

U

Ulcer, gastroduodenal mucosa, paraventric-
ular nucleus stimulation and, R861
Ultrafiltration, muscle and skin, albumin
flux and volume flow in, H458
Unloading, skeletal, bone formation and,
glucocorticoid effects, E875
Uracil ribonucleotide, metabolism, glomer-
ular cells, C712
Urea
basolateral chloride channels, peritubu-
lar hypertonicity effects, F1128
excretion, vasopressin change effects,
R940

flux, ureter, F244
transport, skin (toad), F429
Urecholine, intestinal motility, pancreatic
secretion and, G498
Ureter
excision, inner medullary solute concen-
tration and, F1225
obstruction, renin-angiotensin system
response to relief of, neonate
(guinea pig), F1070
urea flux, F244
Uridine, plasma, glomerular synthesis,
F647
Uridine diphosphoglucose, metabolism,
glomerular cells, C712
Uridine phosphorylase, uracil nucleotide
synthesis and, glomerular, F635
Urinary bladder
ADH action, indomethacin effects
(toad), F74
ADH-stimulated aggregate delivery
(toad, frog), C641
antidiuretic response, microtubular net-
work and (frog), F1098
apical membrane, responses to ADH, cy-
tochalasin B inhibition of (toad),
C526
apical plasma membrane, antidiuretic
hormone (toad), F375
hydroosmotic effect of oxytocin, calci-
tonin inhibition (toad), E613
passive sodium chloride transport, cellu-
lar pathway (flounder), F229
release of GABA, regulation (guinea pig),
R888
sodium transport, stimulation by IGF1
(toad), C413
Urinary concentrating mechanism, ureteral
excision effects, renal medulla,
F1225
Urine
concentration
loop of Henle, countercurrent multi-
plier system (bird), F500
papillary blood flow and, F690
vasopressin change effects, R940
excretion, ANH hormone effects, sodium
depletion, R867
flow
ANF release, hypophysectomy, R534
fetal and adult, vascular volume ex-
pansion and (sheep), R846
inhibition of crystal absorption, F1197
Ursodeoxycholate, hydroxylated, protopor-
phyrin excretion and, liver, G382
Uterus
smooth muscle, myosin phosphorylation
and, C34
sympathetic innervation, pregnancy
(guinea pig), E272

V

Vagal afferents
capsaicin-sensitive pathway, cholecysto-
kinin inhibits gastric emptying,
G242
cardiovascular reflexes, G319
Vagotomy
cardiovascular reflexes, physiological en-
teric stimulation, G319
gastroduodenal motility and (turkey), G1
Vagus nerve
cardiac baroreflex properties, differentia-
tion, R654
mechanoreceptors, CCK effects, G55

parasympathetic denervation, supersen-
sitivity of sinus node and AV node
after, H534
Valine, metabolism, regulation in kidney
mitochondria, E475
Valinomycin, stimulation of acid forma-
tion, permeable gastric glands, G313
Vanadate, glutathione efflux and, hepato-
cytes, G403
Variables, dummy, multiple linear regres-
sion, R353
Vasa recta
amino acid transport, juxtamedullary
nephrons, F397
solute concentration, ureteral excision
effects, F1225
Vascular bed, splanchnic, carotid sinus
baroreceptor control of, H1305
Vascular endothelial cells, insulin trans-
port, intracellular pathways (calf),
C459
Vascular mechanics, intramural lymphos-
tasis and, H1289
Vascular reactivity
abnormal, kinins and, H397
monocrotaline pulmonary hypertension
and, H1484
Vascular recruitment, lung lymph flow,
during increased blood flow, H1149
Vascular responses
endothelium-dependent, coronary artery
constriction, H317
renal hypertension, H693
Vascular wall, composition, sodium con-
tent and vascular reactivity, H860
Vascular waterfall, intramyocardial pres-
sure, coronary flow and, model,
H664
Vasoactive drugs, cardiac baroreflex prop-
erties, differentiation, R654
Vasoactive peptide, C3a, pulmonary artery
responses, H1227
Vasoconstriction
adrenergic, coronary artery (calf), H1452
 α -adrenoceptors and, finger skin, H1000
coronary, vasopressin effects, H261
hypoxic pulmonary, endothelial injury,
H1484
pial vessels, trigeminectomy effects,
H1
pulmonary
intralipid effects, H1499
stretch-induced, H1391
renal, adenosine receptor-induced, mech-
anism of, H885
Vasodepression, atrial natriuretic factor-
induced, central nervous system,
H616
Vasodilation
acetate and cAMP, vascular smooth
muscle, H1378
angiotensin II-induced, aorta (fowl),
R591
cerebral
bioassay of endothelium-derived relax-
ing factor, H1259
blockade from acetylcholine and nitric
acid, H847
endotoxemia effects, heart, H1295
locally mediated, dehydration effects,
hindlimb (baboon), H266
maximal, changes in coronary pressure-
flow relations, H476
muscle, oxygen consumption, tension,
and carbon dioxide tension rela-
tions, H1004

- pial vessels, trigeminalotomy effects, H1
- pulmonary, combined neurohumoral block and, awake state, H1084
- renal, sodium excretion during, renal artery pressure effects, F828
- Vasodilator therapy, pulmonary hypertension and, model, H1232
- Vasomotion, local vascular resistance and, effective diameter, H1240
- Vasomotor mechanism, medullary, pressor responses from stimulations, R709
- Vasopressin: *see also* Antidiuretic hormone
- ACTH release and, CRF and angiotensin II effects, awake state, E46
- action, histidine effects, bladder (toad), F685
- adaptation to sodium delivery and, distal tubule and collecting duct adaptation to, F1256
- adenylate cyclase sensitive to, lithium inhibition of, renal epithelial cells, F995
- adrenal steroidogenesis and, R806
- A6 epithelial response to, dexamethasone acceleration of, C661
- aggregate delivery stimulated by, vesicular transport role in (toad, frog), C641
- aldosterone and, central interactions on cardiovascular system, R166
- ANP release, renal function and, E449
- arginine
- cAMP levels dependent upon, cortical collecting tubules, F43
- circadian variation in response to, E265
- during dehydration, awake state, R46
- mesangial cell contractions, calcium and, F142
- arterial pressure and, awake state, R693
- autoregulation of cardiac output, hypotension, awake state, H44
- calcium mobilization induced by, ANF effects, glomerular mesangial cells, F771
- central, chronic sinoaortic denervation effects, R768
- cerebral circulation and, H70
- characteristics, papillary collecting duct cells, F1160
- cold-enhanced pressor response, spontaneous hypertension, H1018
- dehydration and rehydration, maternal (sheep), E674
- direct cardiac effects, H261
- diuresis, α_2 -adrenoceptor agonist-induced, F317
- growth and, glomerular mesangial cells, F898
- hydraulic conductivity and, cortical collecting tubules, F841
- hypoxia, awake state (sheep), R274
- infusion, intravenous, plasma ACTH concentration and, awake state, R665
- intracellular calcium and sodium transport and, bladder cells (toad), F1015
- intravenous endothelin effects, awake state, R1064
- mean arterial blood pressure and, awake state, H483
- molecular events in expression of, cognate receptors and, F207
- natriuresis, atrial stretch and, R259
- phosphoinositide hydrolysis stimulation, LLC-PK₁ cells, C502
- plasma
- carotid sinus pressure and, H1199
- renal hypertension, H693
- plasma renin activity and, awake state, E793
- postural release, ANP effects, R368
- potassium depletion and, kidney, F1033
- pulmonary vasodilation, combined neurohumoral block and, awake state, H1084
- receptors: *see* Receptors
- regional hemodynamic responses to adrenoceptor antagonism and, awake state, H813
- regulation of CRF secretion, E287
- release, blood and CSF, hemorrhage effects, R731
- renal response to, tonic inhibition by pertussis toxin substrate, F1107
- secretion
- drinking and, during dehydration (pig), R249
- during estrous cycle, R1041
- sodium chloride permeability and, inner medullary collecting duct, F421
- subpicomolar changes, urinary concentration and, R940
- urine flow, vascular volume expansion and (sheep), R846
- vasoconstrictor effect of, blockade after hemorrhage, awake state, H1325
- Vasopressin analogue, fluorescent, binding, collecting duct cells, C622
- Vasoregulation, pulmonary, pentobarbital anesthesia after hypoperfusion, H569
- Vasotocin, antidiuresis induced by, glomerular filtration changes during (kelp gull), R936
- Velocimetry
- laser-Doppler, sympathetic tone and vascular resistance, H937
- rauwolscine, cold-induced vasoconstriction and, finger skin, H1000
- Venomotor responses, central and local hypoxia, H760
- Ventilation, cerebral response to, fetus in utero (sheep), R1049
- Ventral medulla, responses to neurotensin, tracheal and phrenic, R780
- Ventricles: *see* Cerebral ventricles; Heart ventricles
- Ventricular cells, fast inward current, embryonic heart (chick), H540
- Verapamil
- AVP-stimulated calcium efflux and, mesangial cells, F142
- gastrin and somatostatin release, stomach, G627
- myocardial responses, ruthenium red (frog), H1413
- PTH resistance and, duodenal calcium absorption, E702
- Videomicroscopy, fluorescence, renal function, intrarenal adenosine effects, F1230
- VIP: *see* Peptides, vasoactive intestinal
- Vitamin D
- 1,25-dihydroxy-, hypoparathyroidism and pseudohypoparathyroidism, E730
- metabolism
- renal adaptation to phosphate deprivation, R373
- verapamil effects, E702
- Vitamin E, lipid peroxidation, metallothionein response to stress, E518
- Voltage clamp analysis
- acetylcholine effects, AV node, H7
- calcium current and contractility, ventricular myocytes, H1173
- fast inward current, embryonic heart (chick), H540
- Volume
- blood
- atrial distension; natriuresis and, R259
- regulation, α_1 -adrenoceptor mediation, F116
- thermoregulation and, exercise-heat stress, R456
- cell
- hypotonic regulation, medullary thick ascending limb, F962
- ouabain-resistant potassium-rubidium fluxes, red blood cells (sheep), C331
- regulation without active transport, renal, F529
- regulatory decrease, cortical collecting tubules, C612
- regulatory response, erythrocytes (skate), R982
- water flow, proximal tubules (salamander), F188
- expansion
- ANF during, hypothyroidism, R61
- ANF release, hypophysectomy, R534
- ANP and, additive and synergistic interactions, F66
- blood, ANF secretion and, F936
- intrarenal, sodium reabsorption and, proximal, F1178
- renal response to, awake state (monkey), R388
- saline loading, essential hypertension, F1085
- vascular, fetal and adult urine flow (sheep), R846
- flow, albumin flux and, skin and muscles, H458
- intracellular pH and, skin (frog), F126
- left ventricular
- balloon method of measurement, H394
- overloaded heart, H1399
- myocardial wall, changes in coronary pressure-flow relations, H476
- plasma, adrenal gland changes during aging, E903
- pulmonary intravascular, muscarinic regulation of, lung, H1219
- regulation
- ANF and (fish), F1281
- hypotonic, anions in, proximal straight tubule, F853
- regulatory increase, sodium-hydrogen exchange and, control, renal cells (opossum), C76
- stroke, real vs. Windkessel impedance, H742
- venous, forearm, radionuclide plethysmography, H947

W

- Water
- absorption
- bumetanide effects, intestine (flounder), C246
- proximal, F434

SUBJECT INDEX TO VOLUME 255

Water (*continued*)

- balance, regulation of carbon dioxide ventilation and, R105
- body, spontaneous hypertension, F953
- deprivation
 - adrenergic control of renin in, awake state, E793
 - ANP or captopril effects, R737
 - rehydration and, glomerular ANF receptors during, F621
 - vasodilation and, hindlimb (baboon), H266
 - voluntary sodium intake and, R1025
- excretion
 - atrial resection and, awake state, H144
 - renal, intrarenal adenosine effects, F1230
- extracellular content, muscle glucose, E942
- flow
 - osmotic, vasopressin effects, bladder (frog), F1098
 - proximal tubules (salamander), F188
- intake
 - hydrogen homeostasis, osmolality, and body temperature during, R97
 - pregnancy and lactation effects, R1020
 - vasopressin and, during dehydration (pig), R249
- measurement, infrared absorbance, R175
- permeability: *see* Permeability

- salt, adaptation to, kidney (trout), R418
- transendothelial, albumin transfer and, C368
- Water channels, albumin effects, endothelium, H638
- Weight
 - body
 - fasting-refeeding cycle effects, brown fat, E120
 - loss, CRF effects on food intake, E255
 - material influences (vole), R831
 - melatonin and, adults (hamster), R812, R823
 - regulation, CSF glucose and insulin penetration, R200
- Weightlessness
 - bone formation and skeletal unloading, glucocorticoid effects, E875
 - short spaceflight, bone changes after, R243
- Wheat bran, colonic transit time and, radiographic analysis, G633
- Work, preload recruitable, after acute myocardial ischemia, H85

X

- Xanthine oxidase
 - endothelium-dependent relaxation and, diabetic aorta, H825

- granulocytes and, ischemia-reperfusion injury, H1269
- inhibition, allopurinol, H202
- Xanthines, intracellular calcium and, cortical collecting tubule cells, C581

Y

- Yohimbine
 - adrenergic-histaminergic interactions, neural, hindpaw, H426
 - α -adrenoceptors and, microvascular smooth muscle, H121
 - catecholamine-stimulated acid secretion and, jejunum, G640
 - chloride transport and, corneal epithelium (frog), C724
 - vasodepression induced by ANF and, central nervous system, H616

Z

- Zinc, tumor necrosis factor, metabolic effects, E206
- Zollinger-Ellison syndrome, gastrin secretion, gastrinoma cells, G596
- Zona fasciculata, cells, corticosterone in, obesity effects, E229
- Zona glomerulosa, cells, corticosterone in, obesity effects, E229
- Zymogen granules, potassium transport, pancreas and parotid gland, C705

Author Index to Volume 255

- Abas, N., H272
 Abbott, W. G. H., E332
 Abboud, H. E., F674, F1059
 Abe, Y., E129, E437
 Abildgaard, U., H1535
 Aboolian, A., F486
 Abufuf, A., F429
 Accavitti, M. A., C835
 Acevedo, M., C408
 Acheson, K. J., E146
 Achs, M. J., E189, E201
 Adams, E. M., H261
 Adams, J. M., H295
 Adams, T., G772
 Adelberg, E. A., C495
 Adler, G., G236
 Adler, S., F781
 Adrogué, H. J., E812
 Agarwal, J. B., H301
 Agarwal, N., C495
 Agranoff, B. W., G99
 Aguirre, M., H801
 Agus, Z. S., C385
 Ahearn, G. A., R648
 Ahluwalia, M., C552
 Ahmad, S., G352, G462
 Ahokas, R. A., R748
 Ahren, B., E579, E785
 Aithal, H. N., F868
 Akaike, N., H410, H754
 Aki, Y., E437
 Albers, J. J., E894
 Alcock, N., E206
 Alessio, H. M., C874
 Alexander, E. A., F307, F1155
 Alexander, J., Jr., H679, H742
 Alexander, N., R768
 Alexandre, C., R243
 Alfoldi, P., R310
 Alford, F. P., E668
 Alhenc-Gelas, F., E411
 Allen, A. M., H1011
 Allen, D. P., F115
 Allen, I. S., C51
 Allen, M. L., F704
 Allen, S. J., H492
 Allescher, H.-D., G352, G441, G462
 Allesie, M. A., H1359
 Al-Mahrouq, H. A., F15
 Almon, R. R., E850
 Alonso, G., E463
 Alpern, R. J., F807
 Alpert, N. R., H325
 Altschuld, R. A., C162
 Alvarez, L. J., C595
 Alvinerie, M., E688
 Alvo, M., F74
 Amatruda, J. M., E173
 Ammons, W. S., R994
 Amore, B., H885
 Amoss, M. S., C447
 Amoss, M. S., Jr., E59, E469
 Amtorp, O., H1535
 Amundsen, S. M., H879
 Anagnostopoulos, T., F158
 Anaya, T., H1227
 Anderas, P. R., H144
 Anderson, F. L., H601
 Anderson, J. C., R616
 Anderson, J. W., R97, R105
 Anderson, R. J., F841
 Anderson, T. E., E332
 Andreani, D., F1214
 Andreoli, T. E., F1128, F1138, F1145
 Angielski, S., R557
 Anwer, M. A., G713
 Aperia, A., F552, F666
 Appia, F., G319
 Appleyard, R. F., H1405
 Arase, K., E255, R284, R974
 Ardell, J. L., H1050, H1130
 Arend, L. J., C581
 Arfors, K.-E., H629
 Argenzio, R. A., G62
 Arkinstall, S. J., E272
 Armario, A., E518
 Armour, J. A., H789
 Armstead, W. M., H401
 Armstrong, R. B., H1509
 Armstrong, S. M., R237
 Armstrong, W. M., C408
 Arner, P., E737
 Arnold, J., R226
 Arogyasami, J., R38
 Artal, R., E33
 Artman, M., H335
 Ashraf, M., H160
 Askenase, A. D., H301
 Assenmacher, L., E463
 Astrup, A., E572
 Atherton, L. J., F349, F361
 Atkinson, D. E., F807
 Atkinson, M. M., C674
 Au, G. H., E260
 Aubert, J. F., H245
 Audhya, T., E829
 Autefage, A., E688
 Avioli, L. V., E9, E660
 Avison, M. J., F1170
 Aviv, A., C573
 Aw, T. Y., G403
 Azhar, S., E903
 Baba, M., F151
 Baba, S., E652
 Bacon, C. R., C519
 Bacon, R. A., F15
 Baertschi, A. J., H295
 Baerwolff, M., R940
 Bagby, G. J., E629
 Baker, C. H., H426
 Bakulin, A. V., R243
 Balaban, R. S., C181, H185, H189, F581
 Baldwin, B. A., R248
 Ballatori, N., G253
 Ballermann, B. J., F324, F666, F1091
 Balschi, J. A., F626
 Bando, T., R527
 Banks, R. O., F907
 Banner, C., E397
 Barajas, L., F340
 Baranowski, R. L., F1281
 Barasoain, I., R839
 Bárcenas-Ruiz, L., C479
 Baresi, L. A., E153
 Barfuss, D. W., F177
 Barman, S. A., H1130
 Barnhart, R. L., G745
 Baron, A. D., E769
 Baron, C., H1476
 Barrett, P. Q., F1078
 Barry, J. A., G206
 Bartness, T. J., R812, R823
 Bass, A. S., F494
 Bassenge, E., H765
 Bassett, A. L., H1254
 Bassotti, G., G660
 Bastl, C. P., F1235
 Bates, P. C., E166
 Baussant, T., E411
 Beard, J., R90
 Bechtel, P. J., E513
 Becker, E. L., C589
 Bégin-Heick, N., E833
 Beglinger, C., G7
 Beierwaltes, W. H., F408
 Belanger, S. F., H1545
 Bell, C., F1191
 Bell, C. L., C102
 Bell, J. E., C419
 Bell, L., H1219
 Bell, M. E., R344
 Ben-Ari, E. T., E70
 Bengele, H. H., F307, F1155
 Bengtsson-Olivecrona, G., E247
 Benjamin, B. A., R388
 Bennegård, K., H1156
 Bennett, T., R737, H813
 Bennett, W. M., F265
 Benoit, J. N., G542
 Benos, D. J., C419, C835
 Benthem, L., R547
 Benyajati, S., R52
 Berczi, V., H860, H1289
 Berenson, M. M., G382
 Beretz, A., H1276
 Berezin, I., G441
 Berg, J. A., F466
 Berger, E., F728
 Bergman, R. N., E680
 Bergmann, J. E., F1003
 Bergsten, P., E422
 Berkofsky, J., R42
 Berndt, T. J., F96
 Berne, R. M., H1211
 Berner, M. E., H1336
 Bernstein, I. L., R424
 Best, J. D., E668
 Beuchat, C. A., R760
 Bevilacqua, S., E946
 Beydler, S., H467
 Beyenbach, K. W., F1276
 Bianco, A. C., E496
 Biber, B., H691
 Biber, J., C155
 Biber, T. U. L., F922, F930
 Bie, P., R149, R259, R940
 Bieger, D., H789
 Bier, D. M., E366
 Biggers, J. D., C419
 Bikle, D. D., E875
 Binder, H. J., G329
 Birch, F. M., F1281
 Birnbaumer, L., H722
 Bishop, V. S., H974, R693
 Bistran, B. R., R303
 Black, M. A., E833
 Blackburn, G. L., R303
 Blackmon, J. R., H760
 Blair, M. L., E793
 Blair-West, J. R., R205
 Blaise, G., H1032
 Blakemore, L. J., R665
 Bland, R. D., H1336
 Blass, E. M., R901
 Blatteis, C. M., R748
 Blazer-Yost, B. L., C413
 Blizzard, R. M., E559
 Bloch, C. A., E87
 Bloch, K. D., E383
 Block, R., C822
 Blot-Chabaud, M., F605
 Blum, H., C377
 Blumenfeld, J. D., F626
 Bode, H. H., E213
 Bodine-Fowler, S., C43, C684
 Boechat, M. L., E416
 Boepple, P. A., E559
 Bogardus, C., E332, E942
 Boineau, J. P., H503
 Bolinder, J., E737
 Boluyt, M. O., H659
 Bonfils, S., G596
 Boni, C., E946, E953
 Bonjour, J.-P., F957
 Bonke, F. I. M., H1359
 Bonna, R., R128
 Bonting, S. L., R677
 Bonvalet, J. P., F605
 Borbely, A. A., R27
 Borer, K. T., R128, R718
 Borgdorff, P., H280
 Borgström, P., H629
 Boron, W. F., C844, C857
 Borras, M., E518
 Borrell, J., R839
 Bosia, A., C559
 Boston, R. C., E668
 Boucher, R. C., C237
 Boudier, T. G., R968
 Bouhnik, J., E411
 Boulpaep, E. L., F188
 Bourguet, J., C641, F1098
 Bourke, E., F807
 Boutilier, R. G., R395
 Bouyssou, T., G12
 Bovbjerg, D., E824
 Boveris, A., C123
 Boyarsky, G., C844, C857
 Boyce, V. L., E332
 Boyer, T. D., G547
 Braaten, B., G72
 Braze, R. A., R846
 Bradham, D. M., F800
 Bradley, M. E., G367
 Brailion, A., G191, G194
 Brand, P. H., H483
 Brandi, L., E946
 Braquet, P., C559
 Braun, E. J., R760, F500
 Bray, G. A., E255, R284, R507, R974
 Brechtel, G., E769
 Brennan, M. F., E206
 Brennan, S., F301
 Brenner, B. M., F324, F666, F1091
 Brenner, R. M., F626
 Breslau, N. A., E730
 Breslow, M. J., H177
 Brick-Ghannam, C., F43
 Briggs, J. P., R449
 Brindley, G. W., H94
 Bringham, F. R., E886
 Bristow, M. R., H601
 Britton, K. T., R744
 Britton, S. L., H44, H483
 Brizzee, B. L., R46

AUTHOR INDEX TO VOLUME 255

- Broadbent, P., E166
 Brock, T. A., C667, H1549
 Brody, M. J., G191, G194, R166
 Brokl, O. H., F167
 Bronk, J. T., H94
 Bronner, F., F558
 Brooks, D. P., R1041
 Brooks, S. P. J., R289
 Brooks, V. L., R665
 Brown, A. M., H722
 Brown, G. P., E16
 Brown, G. S., R699
 Brown, J., G40
 Brown, M., R744
 Brown, P., E28
 Brownsey, R. W., R699
 Brugnara, C., C346
 Brunner, H., H36, H245
 Brunner, H. R., F1085
 Brunner, M. J., H1244, H1305
 Bruzzzone, R., G33, C699
 Bryan, R. M., Jr., R295
 Buchan, A., G40
 Buchweitz-Milton, E., H623
 Buckley, D. J., H60
 Buehn, M. J., H514
 Buenafior, G., E28
 Bueno, L., G158
 Bugelski, P. F., H1060
 Bulanski, E., R268
 Bülöw, J., E572
 Bunnett, N. W., G676
 Buret, A., G201
 Burg, M. B., F57, C181
 Burger, A. G., E146
 Burini, R., E760
 Burke, J. F., E322, E760
 Burkhardt, D., H679, H742, H1263
 Burnatowska-Hledin, M., F704
 Burnatowska-Hledin, M. A., C581
 Burnett, J. C., Jr., R61
 Burt, D. W., F563
 Burton, H. W., H1043
 Buse, M. G., E159
 Busija, D. W., H343, H401
 Buss, W. C., F265
 Busse, R., H965
 Bussjaeger, L. J., G813
 Bussoloni, F., C559
 Butler, J. P., R350, E696
 Buzby, G. P., C377
 Buzzigoli, G., E946, E953
 Bylund-Fellenius, A.-C., H1156
 Cady, A. B., R310, R748
 Cain, S. M., H77
 Calaresu, F. R., R182
 Calvano, S., E206
 Cameron, J. S., H1254
 Campbell, K. B., H1405
 Campbell, W. B., C214, F474
 Campmany, L., E518
 Camussi, G., C559
 Canavan, T. E., H503
 Candau, M., G12
 Candia, O. A., C595, C724
 Cane, P., E680
 Cannon, W. J., H1050
 Cantiello, H. F., F574
 Cantin, M., F621
 Cantley, L., C531
 Caramelo, C., F771
 Caravella, S. J., G556
 Cardinal, R., H1342
 Carey, R. M., F545, F749
 Carlisle, H. J., R787
 Carlson, M. E., E416
 Carmichael, F. J., G417
 Carretero, O. A., F408, F690
 Carrier, G. O., H1036
 Carroll, K. M., G339
 Carroll, M. A., F151
 Carter-Su, C., E723
 Cartledge, J. T., H375
 Carvounis, C. P., F685
 Casale, J., C603
 Cassano, G., R648
 Cassidy, S. S., H197
 Cassone, V. M., R332
 Castell, D. O., G767, G794
 Castell, J. A., G794
 Castellino, P., F444
 Castro, R., E674
 Caudill, A., G566
 Cavalieri, R. R., E110, E221
 Caverzasio, J., F957
 Cazenave, J.-P., H1276
 Cerbai, E., H872
 Cernacek, P., R929
 Chabardès, D., F43
 Chae, S. W., C798
 Chai, C. Y., R709
 Chaimovitz, C., F429
 Chajek-Shaul, T., E247
 Challiss, R. A. J., E41
 Chamber, G., R908
 Chami-Khazraji, S., F250
 Chan, C. B., G424
 Chance, B., C377
 Chang, D., E46
 Chang, E. B., G339
 Chang, S.-W., H691
 Chang, T.-M., G535
 Chanson, M., C699
 Chap, Z., E812
 Chapler, C. K., H77
 Chaplin, S. B., G1
 Chappard, D., R243
 Charash, W. E., H1421
 Charney, A. N., G247, G696
 Chase, H. S., Jr., F1015
 Chen, B. B., H569, H1084
 Chen, E., F574
 Chen, K. C., C291
 Chen, M., E839
 Chen, P.-S., H891, H902
 Chen, Y.-H., E793
 Cheng, M., C291
 Chenoweth, D. E., H1227
 Cherniack, N. S., R780
 Cherrington, A. D., E428
 Cheung, C. Y., R846
 Chevalier, R. L., F1070
 Chey, W. Y., G535
 Chi, M. M.-Y., C543
 Chiba, T., G99
 Chick, T. W., H1227
 Childs, M. E., H261
 Chiles, T. C., C340
 Chilian, W. M., H1558
 Chinard, F. P., C311
 Chobanian, M. C., F847
 Chou, C. C., G168
 Chow, E., C653
 Christensen, N. J., E572, R149
 Christin, L., E332
 Chu, T.-C., C724
 Churchill, P., H885
 Cieslinski, D. A., F874
 Cimini, C. M., H1384
 Ciriello, J., R882
 Civan, M. M., F126
 Civitelli, R., E9, E660
 Clandinin, M. T., E442
 Clark, D. A., G556
 Clarke, G. D., G55
 Clausen, T., E604
 Claybaugh, J. R., R274
 Clayman, P., F995
 Cleary, M. P., E1
 Clerc, N., G759
 Clerc, P., G113
 Clifton, G. G., R46
 Clougherty, P. W., H569, H1084
 Coady, M. J., C870
 Coburn, R. F., H1476
 Cochineas, C., F66
 Codina, J., H722
 Coe, F. L., F1197
 Cogan, M. G., F434, F1220
 Cohen, J. J., F237
 Cohen, M. V., H834
 Cohen, S., G787
 Coleridge, H. M., R6
 Coleridge, J. C. G., R6
 Collins, S. M., R21, G701
 Compton, A. M., R737
 Condon, R. E., G409, G566
 Cone, C. M., E875
 Conn, C. A., R128
 Conover, K. L., R21
 Conte-Devolx, B., E463
 Conti, F. G., F1214
 Coogan, C., C12
 Cooney, R. A., C226
 Cooper, K. E., R73, H947
 Corbett, S. W., E708
 Corman, B., F250
 Cortes, P., C712, F635, F647
 Corvol, P., E411
 Costa, L. E., C123
 Coulaud, H., R82
 Courneya, C. A., H1199
 Courtney, K. R., H1554
 Covert, R. R., H419
 Cowley, A. W., Jr., H144
 Cox, J. L., H503
 Cox, M., C413
 Cox, R. H., R431
 Coy, D. H., G535
 Cragoe, E. J., Jr., C495, F126, F930
 Crawford, J. D., E559
 Crawford, J. M., G121
 Crawhall, J. C., R929
 Crawshaw, L. I., R600
 Crigler, J. F., Jr., E559
 Crocker, V. M., H1525
 Crofton, J. T., R1041
 Crowell, R. E., H1227
 Crowley, W. F., Jr., E559, E696
 Cserr, H. F., R338
 Cuatrecasas, P., C1
 Cunningham, J. J., E213
 Curran-Everett, D. C., R274
 Cushley, P., F685
 Cutaia, M. V., H329
 Cutler, C. L., E374
 Cutler, R. G., C874
 Cybulsky, M. I., H1549
 Dalton, C. B., G794
 Dampney, R. A. L., H1011
 Daniel, E. E., G352, G441, G462
 Daniele, N. D., H891, H902
 Darnies, P. S., C633
 Danthuluri, N. R., H1549
 Dantzer, W. H., R52, F167, F397
 Darcy-Vrillon, B., G361
 Darmaun, D., E366
 Daugaard, G., H1535
 Daugirdas, J. T., H1378
 Davenport, W. D., E229
 Davidson, J. M., H1018
 Davidson, K. K., F656
 Davidson, P. A., G800
 Davies, N. W., H960
 Davies, P. F., C667
 Davis, B., C789
 Davis, D. L., H426
 Davis, F. C., R439
 Davis, J. W., H85
 Davis, M. J., H1114, H1558
 Dawson, J. S., G55
 Dawson, T. L., C315
 Day, F. P., H937
 Deal, E. C., Jr., R780
 Debas, H. T., G676
 Decker, M. L., C19
 Decker, R. S., C19, C202
 Deen, W. M., F349
 Deen, W. M., F361
 DeFronzo, R. A., F444
 Del Chiaro, D., E946, E953
 Delivoria-Papadopoulos, M., H563
 Delp, M. D., H1509
 DeMaison, L., H169
 DeMichele, S. J., R303
 Demigne, C., R539
 Denef, C., R407
 De Nicolao, G., E775
 Dennis, P. A., C667
 Dennis, R. C., R456
 Dent, J., G352, G490
 Denton, D., R205, R1020, R1025
 DePasquale, M., R338
 Desautels, M., E120
 Descheppe, C. F., E388, R6
 Deshaies, Y., R226
 DeSouza, L. R., G7
 Dhalla, N. S., E347, H1413
 Diamant, S. C., G505
 Diamond, J., G143, G151
 DiCarlo, S. E., H974
 DiCorleto, P. E., F674
 DiDomenico, J., C705
 Diehl, T. S., C667
 Dietz, J. R., R534
 DiGirolamo, M., E716
 Dillingham, M. A., F841
 DiMaggio, E. P., G476
 Dimaline, R., G685
 Dinarello, C. A., E760
 Ding, G., C641
 Dissing, S., C508
 Dixon, E. G., H891, H902
 Dobbins, D. E., H514
 Dobson, G. P., R513
 Dockray, G. J., G685
 Docter, R., E80
 Dodds, W. J., G409, G619
 Dole, W. P., H1317
 Donnelly, W. H., H153
 Donowitz, M., G72

- Donta, T. S., H1349
 Dooley, C. P., G93
 Dorveaux, L. D., H1247
 Dorward, P. K., R654
 Dostal, D. E., H272
 Dousa, T. P., F292, F984
 Downey, J. M., H834
 Drake, R. E., H492
 Drenckhahn, D., C368
 Drewnowska, K., F922, F930
 Drummond, W. H., H419
 Dubois, A., G767
 Dubois, D. C., E850
 Dubuc, P. U., R787
 Dubyak, G. R., C771, F1059
 Ducas, J., H19
 Dudeck-Collart, K. L., C340
 Dudley, M. A., F1138
 Duet, M., G596
 Duke, G. E., G1
 Duling, B. R., H236
 Dulloo, A. G., E180
 Dulos, R. A., E120
 Dumler, F., C712, F635, F647
 Duncan, R. L., F736
 Dunn, M. J., C771, F1059
 Dunning, B. E., E785
 Dysko, R. C., H1043
 Dzau, V. J., F563
- Ebert, T. J., H685
 Ebisuno, S., R724
 Eckardt, A., H651
 Edelman, I. S., C251
 Edelman, S. V., E769
 Edens, N. K., R123
 Edgerton, V. R., C43, C684
 Edwards, B. S., R61
 Edwards, P. R., E403
 Edwards, R. M., F317
 Egan, J. W., H1060
 Egbring, R., H651
 Egnor, R. W., G696
 Ehrhart, I. C., H1096
 Ehrlich, Y. H., H651
 Ekenvall, L., H1000
 Ekins, R. P., E403
 Elander, A., H1156
 Eldred, E., C43
 Elger, B., R418
 Eliasson, A., E737
 Ellingsen, Ø., H228
 Elliot, S. J., F1214
 Ellis, E. F., H397
 Ellis, S. T., G292
 Ellis, V., H885
 Elouaer-Blanc, L., G596
 Elz, J. S., H60
 Elzinga, G., H1263
 Endou, H., F977, F1122
 Endsley, J., R748
 Eng, C., F581
 Eng, M., R326
 Engbreton, B. G., F1276
 Entman, M., E812
 Epstein, A. N., R908
 Epstein, F. H., R212
 Erasmus, T., R936
 Erecinska, M., H1295
 Erickson, R. H., G212
 Erlij, D., C357
 Ernst, P. B., G701
 Ervin, M. G., E674
 Eskin, S. G., H219
 Espinoza, A. M., F74
- Esser, K. A., H659
 Esteve, J.-P., G113
 Estrela, J. M., E801
 Etheredge, S. B., F270
 Etzell, B.-M., H1000
 Evans, J. N., H1391
 Even, P., R82
 Evered, J., E680
 Everts, M. E., E604
 Ewart, W. R., G319
- Faber, J. E., H121
 Fahrenkrug, J., R149
 Falasco, J., R113
 Fallet, R., F1107
 Fändriks, L., G709
 Faraci, F. M., H70, H879
 Fargeas, M. J., G158
 Farman, N., F605
 Fatigati, V., C452
 Faulkner, J. A., H1043
 Fehr, D. M., H569
 Feigl, E. O., H1545
 Fein, F. S., E636
 Fekete, J., F513
 Felder, R. A., F970
 Felder, R. B., H1349
 Feldman, H. A., R350
 Feldman, M., G470, G723
 Feneley, M. P., H1399
 Feng, Z.-C., R478, R485
 Ferguson, A. G., C202
 Ferguson, A. V., R855, R861
 Ferguson, J. L., H1106
 Ferguson, T., F936
 Fernandez, V., F74
 Fernandez-Checa, J. C., G403
 Ferrannini, E., E946, E953
 Ferraris, R. P., G143, G151
 Ferrier, G. R., H992
 Fichtner, H., H965
 Field, J. B., E812
 Filicori, M., E696
 Fimmel, C. J., G221, G229
 Finch, C. A., R326
 Fine, B., C573
 Fink, A. S., G7
 Finn, S. E., G807
 Fioramonti, J., G158
 Firth, J. D., F391
 Fischman, A. J., E265
 Fiscus, R. R., H1378
 Fisher, D. A., E28
 Fisher, D. E., E743
 Fisher, K., C822
 Fisher, R. S., 529
 Fisher, S. K., G99
 Fisler, J. S., R284, R974
 Fitz, J. G., G547, G822
 Fitzgerald, G. A., H15
 Fitzsimons, J. T., R217
 Fleischman, L. F., C531
 Fleishman, K. E., C315
 Flitsch, T. J., E857
 Flouret, G., C822
 Flückiger, J. P., H245
 Fondacaro, J. D., G175
 Forbes, D., G201
 Forgo, J., C155
 Formaker, B. K., R1002
 Forsling, M. L., R248
 Forssell, H., G752
 Forte, L. R., F1040
 Foskett, J. K., C566
 Fossel, E. T., H855
- Fowelin, J., E218
 Fox, J., E702
 Fox, J. E. T., G352
 Frank, J. S., H467
 Franki, N., C641
 Frankle, A. E., H1305
 Franklin, W. A., F868
 Fraser, R., R635
 Fredberg, J. J., R350
 Freeman, H. J., G292
 Freeman, R. H., F1040
 Freymond, D., E332
 Freyschuss, U., H1443
 Fried, M., G7
 Fried, T. A., F313
 Friedlander, G., F22
 Friedman, M. L., R123
 Frizzell, R. A., C835
 Fry, B., F861
 Fujii, A. M., H1525
 Fujii, Y., F466
 Fukuda, A., R134
 Fukuda, Y., F552
 Fukui, K., E129, E437
 Fuller, L. M., R217
 Fuller, S. J., E537
 Funai, J. T., H1136
 Funanage, V. L., C519
 Furler, S. M., E806
 Furuta, T., H288
 Futaki, S., H807
- Gaa, S. T., C51
 Gabel, J. C., H492
 Gaburri, M., G660
 Gagliardi, M., H789
 Galbo, H., R400, E456
 Gall, D. G., G201, G505
 Gall, S. A., Jr., H1399
 Gallagher, K. P., H1043
 Galligan, J. J., G603
 Gamble, W. J., H1391
 Gamelin, L. M., F450
 Ganapathy, V., G85, F177
 Ganey, P. E., H1165
 Ganguly, P. K., E347
 Ganz, M. B., C844, C857, F898
 Gapstur, S. M., F292
 Garcia, R., F621
 Gardiner, P. F., C731
 Gardiner, S. M., H813, R737
 Gardner, D. G., E388, R6, F1220
 Gardner, J. D., G106, G512
 Garella, S., F237
 Garfinkel, D., E189, E201
 Garg, L. C., C502
 Gargus, J. J., C12, F1047
 Garretson, L. T., R583
 Garrick, R. A., C311
 Garrison, J. C., E70
 Garvey, J. S., E518
 Garvin, J. L., F57, F711, R117
 Gasser, K. W., C705
 Gattone, V. H., II, F911
 Gauquelin, G., F621
 Gay, R. G., H801
 Gaynor, J. W., H1399
 Geer, P. G., R259
 Geis, G. S., R703
 Gelfand, J. A., E760
 Gellai, M., F317
 Geller, H. S., H1084
 Gelpi, R. J., H1525
 Gennari, F. J., F349, F361
 Gerencser, G. A., R677
- Gerstberger, R., R575
 Gewirtz, H., H664
 Ghishan, F. K., G482
 Gibbens, D. T., E416
 Gibbs, C. L., C536
 Gibbs, J., R113
 Gick, G. G., C251
 Giebisch, G., F108, F699, F1170
 Gil, F., E801
 Gilányi, M., F513
 Gilbert, D. N., F265
 Gilsanz, V., E416
 Gimotty, P. A., H419
 Gingold, M., F605
 Giocondi, M.-C., F22
 Giordano, C., F444
 Giorgi, C., H1342
 Girling, L., H19
 Giuntini, C., H375
 Glantz, S. A., R353
 Glaubenskle, C., C789
 Gleason, C. A., R1049
 Gleason, T. T., R470
 Glotzbach, S. F., R1008
 Glower, D. D., H85
 Gluck, S. L., F868
 Go, L. O., H1188
 Goering, J. L., R563, F944
 Goetz, K. L., R259
 Göke, B., G236
 Golchini, K., F135
 Goldberg, H., F995
 Goldberg, L. L., F494
 Goldfarb, A. H., C874
 Goldman, B. D., R812, R823
 Goldman, S., H690, H801
 Goldstein, L., R982
 Goldstein, R. E., E428
 Goll, H. M., H569, H1084
 Gollan, J. L., G121
 Gomez, R. A., F1070
 Gomez-Cambronero, J., C589
 Gong, G., F1107
 Gong, Q. Y., C798
 Gonzalez, O., E416
 Gonzalez, R. R., R456
 Good, D. W., F78
 Goodyer, P. R., F1191
 Gores, G. J., C315
 Gorksi, J. P., H101
 Gotez, K. L., R1064
 Goto, K., H970
 Goto, Y., H366, H394
 Gotoh, M., E920
 Goy, R. W., E857
 Goyal, R. K., G587
 Gradmann, D., R677
 Graf, M., E265
 Graham, R. M., H1452
 Graham, S., H801
 Gramse, M., H651
 Granger, D. N., G162, G542, G690, H202, H1269
 Granger, H. J., H554
 Granger, J. P., F828, F1178
 Grassi de Gende, A. O., H587
 Gray, D. A., R936
 Green, T., G685
 Greene, A. S., H1244, H1305
 Grekin, R. J., R449
 Grémeaux, T., E101
 Grider, J. R., G647
 Griendling, K. K., C667
 Grill, H. J., R424
 Grimbert, F. A., H1149

AUTHOR INDEX TO VOLUME 255

- Grisham, M. B., H202
 Griswold, D. E., H1060
 Grodin, M., E28
 Grogan, W. M., F736
 Grosenbaugh, D. A., C447
 Gross, G. J., H825
 Grotendorst, G. R., F800
 Grotyohann, L. W., F911
 Grover, A. K., C297
 Gruenstein, E., C112, C552
 Guan, D., G212
 Guardabasso, V., E775
 Guaza, C., R839
 Guéron, M., C192
 Guerreiro, D., C754
 Guillaume, V., E463
 Gullans, S. R., F626, F666, F1170
 Gunning, M. E., F324
 Gunter, K. K., C304
 Gunter, T. E., C304
 Gunter-Smith, P. J., C808
 Gunther, C., G382
 Guo, Y.-S., G627
 Gupta, M. P., H1413
 Gurd, W., R373
 Gustafson-Sgro, M., H458
 Guth, P. H., G731
 Gutkind, J. S., H646
 Gutkowska, J., R232
 Gutman, M. B., R882
 Gylfe, E., E422
 Györy, A. Z., F66
 Gyr, K., G7
 Gyting, J., H1535
- Haas, J. A., F1178
 Haber, R. S., E912
 Habibi, H. R., R268
 Habuchi, Y., H7
 Hachiya, H. L., C459
 Haddad, J., C19
 Haddox, M. K., G304
 Hade, J. S., H1349
 Haeberle, J. R., C34
 Häggendal, J., G752
 Haggerty, J. G., C495
 Hai, C.-M., C86, C401
 Halban, P. A., C459
 Hall, J. E., F823, R894
 Hall, W. G., R191
 Halloran, B. P., E875
 Hamm, L. L., F301, F861
 Hammerman, M. R., F847
 Hammond, G. L., H1024
 Han, L. R., R174
 Hanau, D., H1276
 Handler, J. S., C661, F375
 Handlogten, M. E., C261
 Hansen, B. F., E621
 Hansen, C. P., G665
 Hansen, S. A., E621
 Hansford, R. G., H347
 Haramati, A., F287
 Harasawa, Y., H679
 Hardison, W. G. M., G454
 Hargrove, D. M., E629
 Harig, J. M., G206
 Harland, R. W., F1116
 Harman, J., R513
 Harper, A. E., E475
 Harrison, E. H., H441
 Harrison, J. M., R470
 Harrison-Bernard, L., R46
 Hartley, C., E812
- Hartmann, H. A., H1173
 Hartzell, C. R., C519
 Harvey, S., R635, R643
 Hashimoto, K., R527
 Hashimoto, M., R527
 Haskell, J. F., E504
 Hasser, E. M., R693
 Hauger, R. L., R744
 Haun, S. E., H1144
 Hauptert, G. T., Jr., F574
 Havre, P. A., H1024
 Haxhiu, M. A., R780
 Hayakawa, A., H288
 Hayashi, M., F220, F466, F1160
 Hays, R. M., C641, F429
 Hazel, J. R., R622, R628, R923
 Head, G. A., R654
 Heath, J. E., R464
 Hebert, S. C., F626, F962
 Hedde, R., G490
 Hedge, G. A., R968
 Heick, H. M. C., E833
 Heilig, C. W., F626
 Heinz-Erian, P., G512
 Heistad, D. D., H70, H879
 Heizer, W., G212
 Helfant, R. H., H301
 Heller, H. C., R178, R1008
 Hellman, B., E422
 Henderson, R. M., F699
 Hennemann, G., E80
 Henrich, W. L., F474
 Henriksson, C. K., G62
 Henriksson, J., C543
 Hentschel, H., R418
 Hering-Smith, K., F301, F861
 Herington, A. C., E293
 Herman, B., C315
 Herrera, E., E280
 Hersey, S. J., G313
 Hershberger, R., H601
 Hess, M. L., H138
 Hess, T., C368
 Hester, R. L., H236
 Heusner, A. A., R350
 Heylings, J. R., G470
 Hidalgo, J., E518
 Higgs, N. B., G27
 Hilden, S. A., F885
 Hill, D. E., H1060
 Hill, D. L., R1002
 Hill, J. O., R616
 Hillegass, L. M., H1060
 Hillgartner, F. B., E54
 Hilsted, L., G665
 Himms-Hagen, J., R874
 Hinton, C. F., G18, G640
 Hinton, D. A., E299
 Hintz, C. S., C543
 Hirano, T., E236
 Hirata, Y., H405
 Hiromasa, S., H7
 Hirschberg, R., F755
 Hiruma, M., E642
 Hisa, H., E793
 Hishida, A., F415
 Hittinger, L., H1525
 Hjemdahl, P., H1443
 Hoang, H. D., G813
 Hochachka, P. W., R513, R699
 Hoerter, J. A., C192
 Hofman, W. F., H1096
 Hogan, W. J., G619
 Hoit, B. D., H1370
 Hökfelt, T., G46
- Holland, S. D., F1033
 Hollywood, J. A., C95
 Holst, J. J., G46
 Holt, S. A., H397
 Holzbach, R. T., G745
 Homcy, C. J., H1452
 Homma, S., F292, F984
 Honda, N., F415
 Honda, T., H704
 Honeyman, T. W., C226, C694
 Hong, S.-K., R274
 Honmura, A., E920
 Hood, D. A., C271
 Hood, D. M., C447
 Hood, V. L., F479
 Hoo-Paris, R., R1035
 Hopfer, U., C705
 Hopkins, D. A., H789
 Hoppe, A., R557
 Hori, M., H250
 Hori, S., H213
 Hostetler, A. M., R1059
 Houghton, D. C., F265
 Houser, S. R., H1173, H1434
 Howard, B. V., E322
 Hruska, K. A., E9, E660
 Hsieh, L.-C., C19
 Hu, D. C. K., E260
 Huan, C. K., E680
 Huang, C.-K., C589
 Huang, A. H., H1545
 Huang, B. S., E839
 Huang, S.-L., F1220
 Hueber, P., F685
 Huebers, H. A., R326
 Huffman, L. J., R968
 Hughes, M. J., C214
 Hugon, J. S., F1098
 Huizinga, J. D., C653
 Humes, H. D., F874
 Humme, J., E674
 Humphreys, M. H., F270
 Hunninghake, G. W., C603
 Hunter, M., F699
 Hurst, N. L., R388
 Husted, R. F., F1160
 Hyman, P. E., G807
 Hymer, T. K., F1033
- Ibarra, C., E613
 Ichihara, T., F614
 Ichimori, K., H213
 Ideker, R. E., H891, H902
 Iguchi, A., E920
 Iitake, K., E449, R731
 Iizuka, M., H1468
 Ikeda, T., C870, E843
 Ikemoto, F., E642
 Ikrényi, C., F513
 Ikrényi, K., F513
 Illebekk, A., H228
 Ilkiw, R., H1499
 Illsley, N. P., C789
 Imoto, Y., H722
 Inada, M., H405
 Inagami, T., F100
 Ingrassia, P. M., G247
 Innes, I. R., H1413
 Inoue, H., H26
 Inoue, M., E449, H250, R731
 Inouye, S.-I. T., R1055
 Insogna, K. L., F1078
 Intaglietta, M., H629
 Intragumtornchai, T., R326
 Iqbal, A., H1032
- Iriki, M., R527
 Irwin, M., R744
 Isenberg, G., H872
 Ishibashi, K., F49
 Ishikawa, N., H288
 Ishikawa, T., H970
 Islam, S., H1378
 Ismail-Beigi, F., C251
 Isohashi, F., R724
 Israel, Y., G417
 Istfan, N., R303
 Ito, C., R134
 Itoh, Z., G619
 Ivy, J. L., E374
 Iwai, K., E23, H250
 Iwai, S., R888
 Iwakura, K., H250
 Iwao, H., E129, E437
 Izzo, J. L., Jr., E793
 Izzo, R. S., G738
- Jackson, D. C., R338
 Jackson, E. K., H386
 Jackson, M. J., C95
 Jackson, W. F., H711
 Jackson-Burns, D. A., H1254
 Jahoor, F., E871
 Jaisser, F., F605
 Jalife, J., H895
 Jamison, R. L., F244, F257, F1225, F1230
 Janiak, P., R166
 Jansson, P.-A., E218
 Jasmin, B. J., C731
 Jeffries, W. B., F1107
 Jenkins, A. B., E806
 Jennings, D. B., R97, R105, R252
 Jennings, R. B., H1188
 Jensen, R. T., G106, G512
 Jepson, M. M., E166, E617
 Jequier, E., E146
 Jo, Y. H., G535
 Joffe, S., E33
 Johannsen, L., R310
 John-Alder, H. B., C271
 Johns, C. A., F885
 Johnson, A. R., C214
 Johnson, J. A., H272
 Johnson, L. R., G304
 Johnson, M. L., E749
 Johnson, P. C., E99, H131, G141, H217, R189, F205
 Johnson, R. L., Jr., H197
 Johnston, G. A., G292
 Jones, C. J., C102
 Jones, C. T., E272
 Jones, D. L., R882
 Jones, M. D., Jr., R1049
 Jongsma, H. J., H770
 Jönson, C., G709
 Jose, P. A., F970
 Jourdan, M. L., R1035
 Joyner, K. M. S., R113
 Juhl-Dannfelt, A., H1443
 Juillerat, L., H36
 Jule, Y., G759
 Jury, J., G441
- Kabas, J. S., H85
 Kabel, E., C479
 Kablitz, C., F1281
 Kachadorian, W. A., C526
 Kachra, Z., F1191
 Kageyama, M., F614

AUTHOR INDEX TO VOLUME 255

- Kagiya, T., H250
 Kahn, T., F182, F763
 Kaissling, B., F1256, F1269
 Kaldunski, M. L., F690
 Kaleta, M., F626
 Kamada, T., H250
 Kamel, F., E314
 Kanaide, H., H410, H754
 Kaneko, T., R635, R643
 Kanwar, Y. S., F590
 Kao, H. W., G807
 Kaplowitz, N., G403
 Kapturczak, E., C502
 Kapusta, D. R., R379
 Karasov, W. H., R174
 Kargacin, M. E., C694
 Karl, H. W., E65
 Karlstad, M. D., R303
 Karmazyn, M., H608
 Kartha, S., F800, F868
 Kaseda, S., H534
 Kasinath, B. S., F590
 Kastin, A. J., E265
 Katz, A., C140, C145, E942
 Katz, A. I., F466
 Katz, A. L., E374
 Katz, L. A., H185, H189
 Katz, M. S., F1033
 Katz, S. A., H1545
 Katzeff, H. L., E824
 Kaufman, A., C357
 Kaufman, A. M., F182, F763
 Kaufman, L. N., E708
 Kawada, T., E23
 Kawai, C., H1311
 Kawamura, M., F100
 Kawazoe, S., F614
 Keesey, R. E., E708
 Keeton, D., C835
 Keil, L. C., E46, R665
 Keim, V., G236
 Kelleher, J. K., C95
 Keller, T. M., F278
 Keller, U., F479
 Keller-Wood, M., E241, R344
 Kelly, D. A., R774
 Kelly, P. J., H94, H101
 Kelly D., F66
 Kemnitz, J. W., E857
 Kempson, S. A., F15
 Khraibi, A. A., R756
 Kielb, M., R128
 Kikuchi, K., G482
 Kikuchi, T., G482
 Kilberg, M. S., C261, C340
 Kilduff, T. S., R178
 Kile, J. P., E59, E469
 Kilpatrick, L., H1295
 Kim, D. D., H1378
 Kim, H.-K., E597
 Kim, J. K., F142
 Kim, S., E129, E642
 Kim, S. H., E531
 Kim, Y. S., G212
 Kimmich, G. A., C468, C737
 Kimura, S., E437, H970, H1254
 Kimura, T., E449, R731
 King, G. L., C459
 Kinsella, J. L., F1183
 Kirchner, K. A., F1206
 Kirk, K. L., C622
 Kiron, M. A. R., H1542
 Kisslo, J. A., H1399
 Kitabatake, A., H250
 Kitakaze, M., H250
 Kithas, P. A., H335
 Klee, G., R61
 Kleiman, R. B., H1173, H1434
 Klein, L. W., H301
 Klein, S., E871
 Kleinman, J. G., G206, F1025
 Klingbeil, C. K., E46
 Klöckner, U., H872
 Klugerman, A. H., R373
 Knepper, M. A., F57, F421
 Knigge, K. M., F868
 Knigge, U., G46
 Knight, D. R., H358, H525, H1452
 Knight, L. C., G529
 Knoblauch, C., C76
 Knox, F. G., R557, R756, F96, F984, F1178
 Kobayashi, R., G676
 Kobayashi, T., H434
 Koch, O. R., C123
 Koehler, R. C., H1516
 Koelbel, C. B., G779
 Kohlhardt, M., H965
 Koizumi, K., R961
 Kojima, I., C442
 Kojima, M., H540
 Komori, K., H207
 Komorowski, R. A., G619
 Konagaya, M., E397
 Konagaya, Y., E397
 Kone, B. C., F666, F1170
 Konishi, T., H1311
 Kontos, H. A., H1, H397, H847, H1259
 Konturek, P., G498
 Konturek, S. J., G498
 Koob, R., C368
 Kopple, J. D., F755
 Koretsky, A. P., H185
 Koretsune, Y., H250
 Kornecki, E., H651
 Korner, P. I., R654
 Korthuis, R. J., G542, G690
 Kostolanska, F., G352
 Kostrna, M., E903
 Kovách, A. G. B., F513
 Kowalchuk, J. M., E41
 Koyama, S., H434
 Kraegen, E. W., E806
 Kralios, A. C., H601
 Kramer, L. B., F736
 Kramer, R. E., E338
 Krams, R., H476
 Krasney, J. A., R274
 Krause, W. J., F1040
 Kraut, J. A., F331
 Krenning, E. P., E80
 Krevsky, B., G529
 Krier, J., G772
 Krilowicz, B. L., R1008
 Krisanda, J. M., C393
 Krueger, J. M., R157, R310, R748, R914
 Kuan, C.-J., H386
 Kubajak, C. L., E314
 Kubillus, S., C822
 Kubina, M., H1276
 Kulik, T. J., H1391
 Kumar, S., F1197
 Kuo, J. S., R709
 Kuo, L., H1558
 Kurihara, M., H646
 Kurokawa, K., C442, F834
 Kurosawa, M., E23
 Kurth, C. D., H563
 Kurtz, I., F135
 Kurzner, S., H53
 Kusama, S., H343
 Kushner, D. C., E559
 Kusunoki, K., H1311
 Kvietys, P. R., G162, G690
 Kwan, W. C., G292
 Kwan, W. W., G143, G151
 Laborde, N. P., E28
 Lacy, D. B., E428
 Ladenheim, E. E., R988
 Ladizesky, M., E613
 Laine, G. A., H492
 Lalonde, J., R226
 Lamb, N. E., F545, F749
 Lambert, R. W., G367
 Lammers, W. J. E. P., H1359
 Lamping, K. G., H1317
 Landaw, E. M., E403
 Landrey, S. R., R622, R628
 Landsberg, L., E180
 Lang, C. H., E629
 Lang, D. J., H131
 Langevin, P. B., H272
 Lanza, F., H1276
 Lapointe, M., R373
 Larivière, R., H693
 Larsen, B., H1535
 Larson, T., F1230
 Lasheras, C., C745
 Laskiewicz, J., G498
 Lattion, A. L., H245
 Latzka, W. A., R456
 Lawer, C., C192
 Lauf, P. K., C331
 Laurent, G. J., C754
 Laurent, S., H36
 Laurentie, M., E688
 Lavalley, M., H1330
 Lavoie, P.-A., C731
 Law, G. J., C633
 Law, W. R., H1106
 Lawler, J. E., R431
 Leach, J., H1227
 Leadley, R. J., Jr., R259, R1064
 Lechan, R., R212
 Ledingham, J. G. G., F391
 Ledsome, J. R., H1199
 Lee, A. D., C145
 Lee, C. O., C278, F787, C798
 Lee, E., G723
 Lee, E. H. Y., R709
 Lee, J., E839
 Lee, K. Y., G535
 Lee, N. P., C237
 Lee, R. W., H690
 Lee, R. Y., E213
 Lee, T. M., R831
 Leeman, E., E241
 Lees, M., G27
 Lefer, A. M., H318
 Leffler, C. W., H343, H401
 Le Grimellec, C., F22
 Lehman, S. L., E94
 Lehy, T., G596
 Leibach, F. H., G85, F177
 Leighton, B., E41
 Le Marchand-Brustel, Y., E101
 Lemasters, J. J., C315
 Lemieux, C., R42
 Lemieux, G., R42
 Lenz, H. J., G298
 Lesch, M., C19, C202
 Levens, N. R., G267
 Lever, J. E., C816
 Levin, E. R., H616
 Levin, N. W., F635, F647
 Levitsky, L. L., E743
 Levy, M., R929
 Lew, W. Y. W., H1370
 Lewin, M. J. M., G596
 LeWinter, M. M., H366, H394, H1370
 Lewis, E. J., F590
 Lewis, E. P., H1421
 Lewis, L. D., G818
 Lewis, M. A., H1421
 Li, Q., C162
 Liacos, J. A., G62
 Liang, J. P., G261
 Liard, J.-F., H1325
 Lichtstein, D., E383
 Liddle, R. A., G818
 Liedtke, C. M., C760
 Liedtke, A. J., H169
 Light, D. B., F278
 Lightman, S. L., R368
 Lillioja, S., E332
 Lin, A. M. Y., R709
 Lin, D., R616
 Lin, P., C112, C552
 Lin, R. H., R709
 Lin, S.-Y., F270
 Linas, S. L., F728, H1181
 Lindblad, L. E., H1000
 Linde, B., H1443
 Lindsey, B. G., H426
 Link, K., E559
 Linshaw, M. A., F853
 Lister, G., H53
 Litten, R. Z., H325
 Liu, A., E894
 Liu, E., G40
 Liu, F.-Y., F434, F1220
 Lively, K. M., E482
 Livermore, R. C., R923
 Lobocki, C. A., R718
 Loeb, J. N., E912
 Lohman-Adham, M., F984
 Logsdon, C., G113, G818
 London, G. M., H36
 Longenecker, G. L., H1075
 Longoni, S., C870
 Lönnroth, P., E218
 Lora-Vilchis, M. C., R908
 Lorente, P., H895
 Lorenz, R. R., H207
 Louie, D. S., G261
 Low, P. S., F115
 Low, R. B., H325
 Lowe, P. J., G454
 Lowry, O. H., C543
 Lucchesi, P. A., C226
 Lückhoff, A., H965
 Lukasiewicz, H., H651
 Lumbers, E. R., F11
 Lumsden, C. J., E357
 Lund, T., H1069
 Lundberg, J. M., G46
 Lundgren, F., H1156
 Lundholm, K., H1156
 Lundin, A., E737
 Lupton, J. R., G633
 Lutz, F., C368
 Lyall, V., C408
 Maccari, F., E946
 MacGregor, R. R., E299

- Madara, J. L., G72
Maddox, D. A., F349, F361
Madias, N. E., F885
Madsen, K. M., F115
Madwed, J. B., R1064
Maher, E., R929
Maier, G. W., H1399
Mailman, D., G162
Majde, J. A., R748
Makhlof, G. M., G647
Malaval, F., E463
Malkinson, T. J., H947, R73
Mallet, R. T., C95
Malmud, L. S., G529
Malvin, R. L., E531, E839
Mamo, J., E236
Manaka, H., G462
Manaka, Y., G462
Mandel, G. S., F1025
Mandel, N. S., F1025
Mandla, S., F88
Mangsen-Baker, C., C226
Mannion, J., R439
Mansfield, M. J., E559
Manyari, D. E., H947
Marcus, M. L., H866
Marcus, P., R855, R861
Marin, J. J. G., G382
Mark, A. L., H496
Mark, D. A., E824
Marshall, J. J., H847, H1259
Marsolais, M., R42
Martin, D., H375, H1149
Martin, I. K., E668
Martin, L. F., F911
Martin, T. J., F957
Martin, T. P., C43, C684
Martins, J. B., H577
Marton, L. J., F270
Marusic, E. T., F74
Maruyama, K., H1499
Masaki, T., H970
Mashiba, H., E843
Massaro, D., R521
Massaro, G. D., R521
Matlib, M. A., C323
Matozaki, T., E652
Matsubara, H., H405
Matsui, K., R731
Matsuki, T., H834
Matsumoto, T., G409
Matsumura, Y., F614
Matsunaga, H., C442, E137, E920
Matthews, D. E., E366
Matthews, E. K., C433
Maurer, A. H., G529
Mautalen, C., E613
Max, S. R., E397
Mayer, E. A., G779
Mayhan, W. G., H70, H879
Mazzocca, N. J., H1173
Mazzoni, M. C., H629
McAllister, E. A., F474
McAnulty, R. J., C754
McBurnie, M., R1020, R1025
McCafferty, G. P., G175
McCall, R. B., R605
McCann, F. V., F278
McConnell, F. M., R982
McCoy, L., R521
McDonough, K. H., H699
McD. Tormey, J., H917, H929
McGiff, J. C., F151
McGowan, H. M., H717
McHugh, P. R., R14, R1059
McKinley, M. J., R205
McKinney, T. D., F656, F1033
McKittrick, D. J., R182
McLaughlin, D. P., H937
McMurty, I. F., H691
McNamara, E. R., F307, F1155
McNeill, H., G556
McPherson, R. W., H1516
Meacher, M. M., G633
Meadows, T. H., H94
Meara, P. A., E213
Mearow, K., E397
Meda, P., C699
Meezan, E., E504
Mege, J.-L., C589
Mehlsen, J., R149
Mehta, J. L., H153
Mehta, P., F1138
Meininger, C. J., H554
Meiss, R. A., C34
Mela-Riker, L. M., F265
Melin, T., G612
Melinyshyn, M. J., H77
Mendel, C. M., E110, E221
Mendelowitz, D., H673
Mendelsohn, F. A. O., H1011
Mené, P., C771, F1059
Mengual, R., F1249
Menon, R. K., E87
Merlo, A., G787
Messana, J. M., F874
Metting, P. J., H44, H483
Meyer, J. H., G7
Meyer, R. A., G772
Meyer, T. W., F1243
Meyer-Lehnert, H., F142, F771
Michael, L., E812
Michaud, A., E411
Michel, J. B., F250
Michel, M. C., E880
Mifflin, S. W., H1349
Mignon, M., G596
Miki, K., R274
Mill, J., E397
Miller, B., E636
Miller, C. E., H1144
Miller, C. F., H177
Miller, D. S., R492
Miller, L. J., G579, G653
Miller, M. J. S., G556, F151
Miller, R. H., E475
Miller, V. M., H446
Mills, S., H616
Millward, D. J., E166, E617
Mimran, A., F1085
Minami, T., R134
Miner, L. K., R846
Miniati, M., H375
Mircheff, A. K., G367
Mirro, R., H401
Mirsky, I., H1525
Mitras, M., C12, F1047
Mitchell, K. D., F383
Miyai, K., G454
Miyamoto, M., F1230
Miyamoto, Y., G85
Miyoshi, H., E871
Mizelle, H. L., R894, F823
Mizrahi, N., E886
Moates, J. M., E428
Moe, A. J., C95
Mohabir, R., H992
Mohan, P. F., E1
Mohler, F. S., R464
Mohrman, D. E., H1004
Mokuda, O., E843
Moldow, R. L., E265
Molony, D. A., F1128, F1145
Molski, T. F. P., C589
Momomura, S.-I., H1468
Monafa, W. W., H953
Monos, E., H1289
Montani, J.-P., H592
Montégut, M., F43
Montgomery, R. J., H94
Montrose, M. H., C76
Montzka, D. P., G175
Mooney, J. L., C408
Moore, R. Y., R332
Morad, M., H111, H960
Moran, T. H., G512, R14, R113, R1059
Moran, W. M., R583
Morand, C., R539
Moreland, R. S., C473
Moreland, S., C473
Moreno-Sánchez, R., H347
Morey-Holton, E., E875
Morgan, D. A., H496
Morgan, R. G. H., G670
Morgan, S. J., C447
Morimoto, S., F614
Morin, L. P., R1
Morkin, E., H801
Morley, J. E., E153
Morris, B. J., E353
Morris, D. L., H937
Morris, K. G., H691
Morris, M., R768
Mortimore, G. E., C70
Moseley, J., F957
Moseley, R. H., G253
Moskowitz, M. A., H1
Moss, M., H53
Mostow, W. R., C202
Motulsky, H. J., E880
Moumami, C., G571
Muallem, S., G221, G229, F331
Mullane, K. M., G556
Muller, J., C661
Müller, M. J., E146
Müller, S., F479
Mulrone, S. E., F287
Munger, J. C., R174
Murer, H., C76, C155
Murphy, M. B., F494
Murphy, R. A., C86, C401, C473, C719
Murphy, S. M., G253
Murray, P. A., H569, H1084
Murry, C. E., H1188
Mustafa, S. J., H1492
Muto, S., F108
Muza, S. R., R456
Myers, B. D., F257
Myers, C. L., R295
Nadeau, R., H1342
Nag, A. C., C291
Nagai, K., E928
Nagai, R., H325
Nagao, M., E652
Nagata, M., H1330
Nakagawa, H., E928
Nakagawa, Y., F1197
Nakamura, A., E437
Nakamura, M., C573, H410, H754
Nakamura, Y., H1311
Nakanishi, S., E129
Nakanishi, T., C181
Nakanishi, Y., R724
Nakao, A., F704
Nakayama, K., E129
Nakazawa, H., H213
Naruse, S., G522
Nash, N. T., C245
Natali, A., E953
Nauntofte, B., C508
Navar, L. G., F383, F936
Navarro, L. T., H219
Naylor, W. G., H60
Nazian, S. J., R534
Nellis, S. H., H169
Newby, F. D., E716
Newsholme, E. A., E41
Nichols, W. W., H153
Nicolaidis, S., R82
Niel, J. P., G759
Niemenen, A.-L., C315
Niewiarowski, S., H651
Nilsson, A., G612
Ninomiya, I., H704
Nishijima, M. K., H177
Nishimoto, I., C442
Nishimura, H., R591
Nishimura, M., H7
Nishizaki, H., E652
Nissenbaum, J. W., R672
N. Mochinaga, N., G409
Noeh, Z., F429
Nolan, C. R., H1181
Nolan, K., G713
Noma, A., H980
Noma, S., H301
Nompoggi, D., G767
Nonoguchi, H., F421
Norbeck, O., H1000
Nord, E. P., F486
North, R. A., G603
Northrup, T. E., F237
Notter, R. H., R1049
Novakofski, J., E513
Novikov, V. E., R243
Nowicki, P. T., H1144
Nozawa, T., H807
Nunez, A. A., E583
Núñez-Durán, H., C479
Nussberger, J., H36, H245, F1085
Nutting, C., H1378
Nuwayhid, B. S., H592
Nyhan, D. P., H569, H1084
Nyomba, B. L., E942
Oates, P. S., G670
Obal, F., Jr., R310
Obál, R., Jr., R914
Oberleithner, H., F699
O'Connor, R. P., F874
O'Donnell, M. E., C169
Ogata, E., E137, C442
Ohishi, K., F415
Ohkubo, H., E129
Ohkuwa, T., E456
Okino, H., H213
Okuda, Y., E812
Okusawa, S., E760
Olbe, L., G752
O'Leary, D. S., H910
Oleggin, M., E946
Olivecrona, T., E247
Oliver, C., E463
Ong, F., R1025

AUTHOR INDEX TO VOLUME 255

- Onsgard, M., F984
Onsgard, M. J., F96
Ookhtens, M., G403
Oomura, Y., R134
Oparil, S., H1018
Opp, M. R., R914
Orlando, R. C., G286
Orrego, H., G417
Ortola, F. V., F1091
Osaka, T., R961
Osborn, J. L., F1116
Osborne, J. A., H318
Osborne, P., R1025
Osgood, R. W., F313
Ota, K., E449, R731
Ota, M., E449
Owen, N. E., C169
Owyang, C., G261
- Pachter, J. A., C633
Page, R. B., R295
Paielli, D. L., F647
Pairet, M., G12
Palle, S., R243
Paller, M. S., F539
Pallone, T. L., F1225
Pan, C. M., R709
Panagia, V., E347
Pandol, S. J., G221, G229
Pandolf, K. B., R456
Pang, P. K. T., R635, R643
Papadopoulos, M. T., H1476
Pardridge, W. M., E221, E403
Pares-Herbuté, N., E463
Parisi, M., E613
Park, C. H., F520
Park, I. R. A., R874
Park, J., G99
Park, M., H160
Park, T. S., H1211
Parker, J. C., H375, H1075, H1130, H1149
Parkhouse, W. S., R513
Parks, D. A., H202
Parmentier, M., F100
Parrott, R. F., R248
Patchin, D., F685
Patel, A., G779
Paterson, W. G., G587
Paton, J. B., E743
Patrick, M., G201
Paul, R. J., C393, C465
Paul, R. V., F936
Peach, M. J., C452, F545, F749
Peikin, S., G685
Pekar, S. K., F898
Pell, J. M., E166
Pellecchia, C., G738
Penniston, J. T., H101
Perdue, M., G201
Perfetto, M. C., F898
Perna, A., F444
Perry, M. L., H1075, H1130
Peticucci, E., F237
Peter, R. E., R268
Peters, E. J., E548
Petersen, O. H., G275
Peterson, D. R., C822
Peterson, J., E247
Peterson, M. W., C603
Peterson, T. V., R388
Peterson-Yantorno, K., F126
Pettinger, W. A., F1107
Phifer, C. B., R191
Philipson, K. D., C870
- Phillips, M. I., C502, R500
Piacsek, B. E., E482
Pichet, R., H1330
Pickett, J. B., C60
Pieper, D. R., R718
Pieper, G. M., H825
Pillion, D. J., E504
Pinto, M. R., H101
Pistolesi, M., H375
Pitt, R. M., H1075
Pittam, B. S., G319
Pizurki, L., F957
Planelles, G., F158
Plata-Salamán, C. R., R134
Plecha, D. M., R703
Plotsky, P. M., E287
Ploug, T., E456
Poapst, M., E236
Pohl, U., H765
Pomerantz, S. M., E857
Porcelli, R. J., H329
Porte, D., Jr., R200
Porter, J. R., E229
Portman, M. A., H189
Potts, J. T., Jr., E886
Pourcyrus, M., H343
Poustis-Delpont, C., F1249
Powers, K. V., F340
Powers, S. P., G579
Praisman, M., G738
Prasad, R., F1183
Pratt, R. E., F563
Preisig, P. A., F461
Pressley, T. A., C251
Preston, A. S., C661
Pretus, H. A., R46
Prewitt, R. M., H19
Priebe, H.-J., H1232
Prince, M. J., E548
Pritchard, J. B., R492, F597
Proppe, D. W., H266
Prosdociimi, M., C559
Pryor, A., R128
Putney, J. W., Jr., C149
- Qin, D., H980
Qu, L., R946
Quamme, G. A., G292
Quenneville, A., R42
Quinn, S. J., E488
Quinton, P. M., C102
- Rabinovitch, M., H1484, H1499
Rabito, C. A., C745
Radke, K. J., E793
Raff, H., R851
Raich, P. C., R563, F944
Raine, A. E. G., F391
Rajotte, R., R1035
Ramachandran, J., E903
Ramagopal, M. V., H1492
Ramanathan, M., H197
Ramaswamy, K., G206
Randall, W. C., H358, H525, H789, H1050, R703
Randles, J., C486
Rankin, A. J., H1199
Rankin, J. S., H85, H1399
Rannels, D. E., E65
Rao, M. C., C245
Rao, P. S., E636
Rapoport, J., F429
Rapoport, S. I., R317
Rattan, S., G389, G571, G587
Rausch, R. N., R600
- Ravussin, E., E332
Rawashdeh, N. M., R67, R794
Ray, N. D., R67, R794
Ray, S., F574
Raybould, H. E., G242
Raymond, K. H., F1033
Razlog, Y., H53
R. D. Ridgeway, E299
Read, N. W., G490, G800
Reading, R. D., G286
Reaven, E., E903
Rechthand, E., R317
Rector, F. C., Jr., F461
Reddy, S., F66
Redfern, J. S., G723
Reed, J. B., C828
Reed, R. K., H1069
Reed, W. P., H1227
Reeve, L. E., G745
Reeves, J. P., H722
Reeves, W. B., F1138, F1145
Regal, R. R., H1004
Regazzi, R., C699, G33
Reid, I. A., E46
Reid, I. R., E9, E660
Reimer, K. A., H1188
Reimer, P. R., F500
Rembold, C. M., C719
Remesy, C., R539
Ren, C., G403
Reneman, R. S., H1240
Renkin, E. M., H458
Rennke, H. G., F1243
Repine, J. E., F728
Restrepo, D., C304
Revtyak, G. E., C214
Ribet, A., G113
Riboni, L., C479
Ribstein, J., F270, F1085
Richard, D., R226
Richard, V. J., H1188
Richardson, B. P., C433
Richardson, S., E829
Richter, D., F207
Richter, E. A., E621
Riedel, G. L., H1091
Riese, J. W., F1025
Riese, R. J., F1025
Rigel, D. F., H311
Rillema, J. A., E567
Ringo, J. A., H1405
Ritchie, A. K., H219
Ritter, R. C., R569, R988
Rizzoli, R., F957
Robb, R., R117
Robberecht, W., R407
Robert, M. Q., E280
Roberts, M. H., R332
Robertson, C., F1230
Robie, N. W., R379
Robinson, K. A., E159
Robinson, N., H1247
Robinson, P. H., R14
Robinson, V., H947
Rocchetti, M., E775
Rochat, T., C603
Rochet, N., E101
Rodbard, D., E775
Rodriguez-Zendejas, A. M., R908
Roe, T. F., E416
Roeder, L. M., C133
Rogers, T. B., C51
Roman, R. J., F690
Romsos, D. R., E54, E597, R141, R952
- Rook, M. B., H770
Rose, C. E., Jr., F545, F749
Rose, J. C., R67, R794
Rosenberg, E., H1542
Rosenberg, H. C., H1484
Rosenberg, I. H., G339, G361
Rosenblum, J. L., G374
Rosenfeld, M. J., F1281
Rosenthal, M., R478, R485
Rosewicz, S., G818
Ross, M. G., E674
Rossi, N., H885
Roth, R. A., H1165
Rothe, C. F., H690
Rothwell, N. J., E617
Rotwein, P., E513
Rowell, L. B., H760
Roy, R. R., C43
Rozen, R., F1191
Rozsa, F. W., E723
Rubanyi, G. M., H783
Rubio, R., H1211
Ruckebusch, Y., G12
Ruegg, J. C., C465
Rühs, H., R418
Rumsey, W. L., H1295
Russek, M., R908
Ruszniewski, P., G596
Rutlen, D. L., H1219
Ryan, J., R61
Ryan, U. S., C311
Rybczyńska, A., R557
Rymaszewski, Z., H160
- Saavedra, J. M., H646
Saba, T. M., H1421
Sacktor, B., F1183
Sacquet, J., H729, H736
Sada, H., H540
Sadoshima, J.-I., H410, H754
Safar, M. E., H36
Sagawa, K., H1263
Saito, K., H1
Sakaguchi, T., R284, R507
Sakamoto, C., E652
Sakamoto, N., E920
Sakamoto, T., H953
Sakamoto, Y., R724
Saldivia, V., G417
Salhanick, A. I., E173
Salmons, S., C543
Saltiel, A. R., C1
Salzman, E. W., H855
Samarel, A. M., C19, C202
Samson, S. E., C297
Samuel, D., R718
Sanabria, P., H638
Sander-Jensen, K., R149
Sanders, B. J., R431
Sanders, K. M., C828
Sands, J. M., F421
Sandström, P.-E., E591
Sann, H., R575
Sansom, S., F108
Santi, P. A., F711
Santorio, D., E953
Santorio, N., E696
Sarna, S. K., G409, G619
Sartori, L., F1078
Sary, G., R310
Sas, D., G653
Sasaki, S., F49
Sassari, J., H729, H736
Satlin, L. M., F1003
Sato, A., E23

- Sato, K., E449
 Sautel, M., H729, H736
 Savard, P., H1342
 Savoie, F., E411
 Sawka, M. N., R456
 Sawmiller, D. R., G168
 Scaduto, R. C., Jr., F911
 Scarpa, A., F1059
 Scarpace, P. J., E153
 Schaeverbeke, J., F250
 Scheid, C. R., C226, 694
 Scheide, J. L., G247
 Schelling, M. E., H554
 Schelling, P., H1206
 Scher, A. M., H673, H910
 Schersten, T., H1156
 Schettini, A., R799
 Scheurink, A. J. W., R200, R547
 Schick, U., H19
 Schiebinger, R. J., H1429
 Schiffrin, E. L., H693, F621
 Schilling, W. P., H219
 Schipke, J., H679, H742
 Schjoldager, B., G579
 Schmach, D. C., H1050
 Schmid, P. G., H70
 Schnall, M. D., C377
 Schneider, E. G., R806
 Schneider, F., H1289
 Schnellmann, R. G., C28
 Schnermann, J., F33, R449
 Schoeffield, M. S., G221, G229
 Schoen, H. F., C357
 Schouten, V. J. A., H1263
 Schreiner, V. J., G286
 Schrier, G. M., H138
 Schrier, R. W., F142, F771
 Schroeder, E. T., F685
 Schroedl, N. A., C519
 Schubert, C., F479
 Schuessler, R. B., H503
 Schultheiss, H.-P., H960
 Schultz, H. D., R6
 Schulz, E. E., E416
 Schulz, I., G429
 Schulz, R., H679
 Schuster, V. L., F220, F720
 Schwartz, G. J., F1003
 Schwartz, J. H., F307, F1155
 Schwartz, T. W., G46, R149
 Schwartzman, M., F151
 Scicchitano, R., G701
 Scicli, A. G., F408, F690
 Sciafani, A., R672
 Scott, J. A., C745
 Scott, J. W., R828
 Scott, N., R61
 Scott, R. B., G505
 Scriver, C. R., F88
 Seal, A., G40
 Sebokova, E., E442
 Seeger, W., C368
 Segre, G. V., E886
 Seguin, E. B., G99
 Sehlin, J., E591
 Seibert, G. B., H197
 Seidman, C. E., E383
 Seidman, J. G., E383
 Seitz, R., H651
 Seldin, D. W., F807
 Selhub, J., G361
 Seri, I., F666
 Serizawa, T., H1468
 Sessler, F. M., E531
 Severi, C., G647
 Sha'afi, R.I., C589
 Shah, R., G389
 Shah, S. V., F438
 Shangraw, R. E., E548
 Shanley, P. F., F728
 Share, L., R1041
 Shargill, N., E255
 Shargill, N. S., R974
 Sharp, F. R., R178
 Shasby, D. M., C781
 Shasby, S. S., C781
 Sheikh, S. P., G46
 Shen, Y.-T., H358, H525
 Shenasa, M., H1342
 Shenberger, J., H937
 Shenker, Y., R867
 Shepherd, A. P., H1091
 Sherebrin, R., R946
 Sheridan, J. D., C674
 Sherman, D. J., E674
 Sherman, W. M., E374
 Shi, L.-B., F1220
 Shibata, N., H891, H902
 Shibuya, N., E137
 Shigei, T., H288
 Shimazaki, S., H953
 Shimizu, H., E255
 Shin, A., C653
 Shine, K. I., H467
 Shinozaki, Y., H213
 Shinsako, J., E241
 Shinyama, H., F614
 Shionoya, S., G522
 Shiozawa, D. K., F1281
 Shirakawa, J., R888
 Shiratori, K., G535
 Shnayder, L., R1059
 Shoham, S., R157
 Shoji, M., E449, R731
 Shouji, T., E437
 Shoukas, A. A., H1305
 Shultz, P. J., F674
 Siaume-Perez, S., F43
 Sibley, L., H458
 Sick, T. J., R478, R485
 Siderowf, A. D., R846
 Silberagl, S., F397
 Silen, W., G395
 Silva, J. E., E496
 Silva, P., R212, F324
 Silver, B. J., F674
 Silverman, M., E357
 Simon, E., R575
 Simon, E. E., F861
 Simon, G., H860
 Simon, S. A., R117
 Simonsen, L., E572
 Simonson, M. S., C771
 Singh, A. K., F590
 Singh, P., G627
 Sinoway, L. I., H937
 Sipkema, P., H280, H476
 Siragy, H. M., F545, F749
 Siri, F. M., H452
 Sisk, C. L., E583
 Sjövall, H., G752
 Skak-Nielsen, T., G46
 Skale, B. T., H26
 Skelton, M. M., H144
 Skopicki, H. A., C822
 Skorecki, G., F995
 Sköft, O., F1
 Slaaf, D. W., H1240
 Sladek, C. K., E793
 Sladky, K. K., E857
 Slayman, C. W., C495
 Slinker, B. K., H366, H394, R353
 Slomowitz, L. A., F755
 Smith, B., H717
 Smith, D. B., H1254
 Smith, E. F., III, H1060
 Smith, E. R., H947
 Smith, F. G., F11
 Smith, G. P., R113
 Smith, J. K., G542
 Smith, L. W., H699
 Smith, M., H855
 Smith, P. B., F474
 Smith, P. L., G175
 Smith, P. M., R492
 Smith, Q. R., R317
 Smith, S. M., R90, C519
 Smith, S. R., H94
 Smith, T. K., C828
 Smith, U., E218
 Smith, W. L., F704
 Smith, W. M., H891, H902
 Snape, W. J., Jr., G779, G807
 Snow, D. H., R513
 Sobhani, I., G596
 Soejima, H., R449
 Soffer, R. L., H1542
 Soll, A. H., G424
 Solomon, R., R212
 Solomon, T. E., G813
 Solti, F., H1289
 Somers, M. B., G529
 Sonn, J. K., C278
 Sonne, B., R400
 Sonneblick, E. H., E636
 Sonnenburg, W. K., F704
 Sorscher, E. J., C835
 Soto-Mora, L. M., R908
 Sowell, M. O., E159
 Sparks, H. V., H1460
 Spencer, J., R861
 Sperelakis, N., H540
 Sperling, M. A., E33, E87
 Spielman, W. S., C581, F704
 Spitzer, J. J., E629
 Spratt, J. A., H85
 Spray, D. C., C699
 Spring, K. R., F711
 Sprugel, K. H., H1165
 Stadeager, C., R149
 Stanley, W. C., E94
 Stanton, B. A., F278, F1256, F1269
 Staple, L. H., C754
 Star, R., F807
 Starnes, H. F., Jr., E206
 Steadman, E., C835
 Steffens, A. B., R200, R547
 Stein, J. H., F313
 Stein, W. D., F558
 Steinbach, J. H., G454
 Steiner, G., E236
 Steiner, L., G313
 Steiner, M., C502
 Stern, A. M., E886
 Sterzel, R. B., C844, C857, F898
 Stevenson, J. L., E293
 Stevenson, T. R., H1043
 Stewart, D. J., G346, H765
 Stierli, A., H1276
 Stiles, G. L., E636
 Stirewalt, W. S., H325
 St-Louis, J., H693
 Stock, M. J., E617
 Stoff, J. S., R212
 Stokes, B. T., C162
 Stokes, J. B., F220, F229, F720, F1160
 Stoner, L. C., F1276
 Storch, K. J., E322
 Storelli, C., R648
 Storer, G. B., E306
 Storey, K. B., R289, R744
 Strada, S. J., H335
 Strader, J. R., H44
 Strange, K., C612
 Striker, G. E., F1214
 Striker, L. J., F1214
 Stuart, C. A., E548
 Stubbart, J. R., E723
 Stutard, E., R513
 Suarez, R. K., R699
 Subbiah, M. T. R., H160
 Sudaka, P., F1249
 Suga, H., H807
 Sugden, P. H., E537
 Sugimoto, T., H1468
 Sugiya, H., C149
 Sullivan, M. P., H295
 Sun, A., F962
 Sun, Y., H664
 Sundberg, D. K., R67
 Surmacz, C. A., C70
 Surprenant, A., G603
 Susini, C., G113
 Sutton, E. T., H426
 Sutton, R., R368
 Sutton, S. W., E287
 Suttrop, N., C368
 Suvannapura, A., G267
 Suzuki, K., G275
 Suzuki, T., G619
 Svoboda, M., G113
 Swain, J. A., H189
 Swanson, V., H1378
 Swick, A. G., E865
 Swick, R. W., E865
 Sykes, M. N., E716
 Synhorst, D. P., R232
 Szafarczyk, A., E463
 Szczepanska-Konkel, M., F984
 Szilagyi, J. E., H987
 Szlyk, P. C., R252
 Szurszewski, J. H., G566
 Taborsky, G. J., Jr., E785
 Taché, Y., G242
 Taddei, S., E953
 Tahiri-Jouti, N., G113
 Taira, Y., E347
 Takagi, T., G522
 Takagi, Y., H405
 Takahashi, J. S., R1055
 Takahashi, M., R507
 Takaichi, K., F834
 Takakura, K., E137
 Takata, S., H405
 Takeda, K., F142
 Tamai, J., H250
 Tamura, K., F1122
 Tanaka, C., R888
 Tanaka, N., H807
 Tangelder, G.-J., H1240
 Taniyama, K., R888
 Tannenbaum, G. S., R373
 Tanner, J. A., C34
 Tanti, J.-F., E101
 Tao, W., C589
 Taquini, A. C., C123

AUTHOR INDEX TO VOLUME 255

- Tarjan, E., R1020, R1025
 Tasdemiroglu, E., H1050
 Taylor, A. E., H375, H1075, H1130, H1149
 Tazuma, S., G745
 Teague, W. G., H1336
 Telford, G. L., G566
 Templeton, G. H., H197
 Tenenhouse, H. S., R373, F88
 Teramoto, A., E137
 Terjung, R. L., C271
 Tessari, F., C559
 Thames, M. D., H1136
 Thebert, M. M., E583
 Theodorsson-Norheim, E., G46
 Thévenod, F., G429
 Thibault, G., F821
 Thiruvengadam, R., G476
 Thomas, E. M. V., R237
 Thomas, J. W., E397
 Thomas, J. X., Jr., H358, H525
 Thompson, J. C., G627
 Thompson, L., H153
 Thor, P., G490
 Thoren, P., H496
 Thornton, R. M., H266, H1018
 Thornton, S. N., R248
 Tildon, J. T., C133
 Tillotson, D. L., E488
 Tipayamontri, U., H592
 Tipnis, U. R., G304
 Tisher, C. C., F115
 Toback, F. G., F800, F868
 Tobey, N. A., G286
 Tobin, B., R90
 Tobler, I., R27
 Tokumo, H., G745
 Tollefsen, S. E., G374
 Tollefsen, J. H., E894
 Toma, B. S., H1460
 Tominaga, M., E843
 Tomoike, H., H410
 Tonge, A., G27
 Tonini, M., G603
 Tonkin, A. M., H1247
 Toorop, G. P., H1263
 Toouli, J., G490
 Topping, D. L., E306
 Torres-Aleman, I., R839
 Tosteson, D. C., C346
 Toutain, P. L., E688
 Townsley, M. I., H1075
 Toyofuku, T., H434
 Trachsel, L., R27
 Traystman, R. J., H177, H1516, R1049
 Tredget, E. E., E760
 Trimble, R. P., E306
 Tripathi, S., F188
 Trivedi, R. D., R780
 Tsai, P., F771
 Tseng, C.-C., G304
 Tao, P., G690
 Tullson, P. C., C271
 Tur, L., H111
 Turek, F. W., R1055
 Turnamian, S. G., G329
 Turnberg, L. A., G27
 Turner, A. J., G676
 Turner, J. D., E513
 Turrini, F., C559
 Twente, S., E829
 Twidale, N., H1247
 Ubaldo, E., C479
 Uchida, S., F977
 Ulrich, G., H960
 Umeda, Y., H405
 Unger, T., H1206
 Ungerstedt, U., E737
 Vaccarezza, S. G., G696
 Vale, W. W., E287
 Valenti, G., F1098
 Valenzuela, J. E., G93
 Valeri, C. R., R456
 Van Der Heijden, J. T. M., E80
 Van der Kraak, G., R268
 Van Deventer, G., G779
 Van Dijk, L. C., H476
 Vandongen, R., H717
 Van Dreal, P., F1107
 Van Eekelen, J. A. M., R500
 Van Epps, D., H1227
 Van Ginneken, A. C. G., H770
 Van Ha, T., C346
 Vanhoutte, P. M., H207, H446, H1032
 Van Lunteren, E., R780
 Van Obberghen, E., E101
 Van Scott, M. R., C237
 VanSoy, M., F984
 Van Toor, H., E80
 Van Wylen, D. G. L., H1211
 Vargas, F. F., H638
 Varghese, G. A., G417
 Vassort, G., C192
 Vatner, D. E., H1452
 Vatner, S. F., H358, H525, H1452, H1525
 Vaysse, N., G113
 Veale, W. L., R73
 Veelken, R., H1206
 Veith, R. C., E785
 Veldhuis, J. D., E749
 Vengen, Ø. A., H228
 Venuto, R. C., E16
 Verkman, A. S., C789
 Verlander, J. W., F115
 Vermeulen, M., H1342
 Vermillion, D. L., G701
 Vico, L., R243
 Victor, R. G., H496
 Viguerie, N., G113
 Vila, J. M., E801
 Vilella, S., R648
 Villeneuve, S. M., H77
 Viña, J., E801
 Vincent, M., H729, H736
 Vissing, J., E456, R400
 Vitković, L., E397
 Voelkel, N. F., H691
 Vogl, W., R699
 Von Dreele, M. M., F953
 Von Schrenk, T., G512
 Vrieling, H. H. E. O., H1240
 Wabner, C. L., F1197
 Wade, J. B., C526
 Wade, P. R., G184
 Waerber, B., H245, F1085
 Wagerle, L. C., H563
 Wagner, D. A., E322
 Wagner, J. G., H1165
 Walker, B. R., H261, R46
 Walker, H. C., R952
 Walker, J. S., C536
 Walker, P. D., F438
 Wall, S. M., F331
 Wallace, J. L., R861
 Wallace, P., E769
 Walser, B. L., F244
 Walsh, E. K., R799
 Walsh, J. H., G676
 Walsh, K. P., R368
 Walsh, L. G., H917, H929
 Walsh-Reitz, M. M., F868
 Walusimbi-Kisitu, M., H441
 Wang, B. C., R259, R1064
 Wang, D. Y., C798
 Wang, L. C. H., R1035
 Wang, X., E723, H1378
 Wangler, R. D., H1460
 Wank, S. A., G106
 Warberg, J., G46, R149
 Ward, W. F., C70
 Warden, D. H., F720
 Ware, J. A., H855
 Warhurst, G., G27
 Warren, R. S., E206
 Warwick, B. P., R141
 Wasserman, D. H., E428
 Wasserman, M. A., G175
 Watanabe, T., E23
 Watanabe, Y., H7
 Waters, S. B., E567
 Watlington, C. O., F736
 Wattenbarger, J. M., H197
 Wayland, H., G731
 Weaver, L. C., R946
 Webb, R. C., H1542
 Weber, J.-M., R513
 Weber, K. M., E668
 Weber, M. A., H616
 Webster, S. K., F287
 Wei, E. P., H1, H397, H847, H1259
 Weingarten, H. P., R21
 Weinstock, M., R654
 Weinstock, R. S., E730
 Weintraub, W. S., H301
 Weischedel, G. R., H1188
 Weisiger, R. A., E110, E221, G822
 Weisinger, R. S., R205
 Weiss, H. R., H623, H1384
 Welch, I. McL., G800
 Weller, A., R901
 Welling, D. J., F529
 Welling, L. W., F529
 Welling, P. A., F853
 Wendt, I. R., C536
 Wennmalm, A., H15
 Wert, J. J., Jr., C70
 Werther, G. A., E33
 Wertz, J., F911
 Wesslén, N., E422
 Westbrook, S., E660
 Westenfelder, C., F1281
 Westerhof, N., H280, H476, H1263
 Wheeler, N., H467
 White, B. D., E229
 White, C. W., H866
 White, J. F., G18, G640
 White, R. E., H1036
 White, S. M., H1165
 White, T. P., H659
 White, J. F., R677
 Whiteside, C. I., E357
 Whittenburg, D., F728
 Widmaier, E. P., E287
 Wierzbicki, A., E442
 Wiessner, J. H., F1025
 Wiig, H., H1069
 Wike, J. S., H335
 Wilczynski, E. A., H496
 Wilke, A., C368
 Williams, E. A., H94
 Williams, G. H., E488
 Williams, J. D., C447
 Williams, T. D. M., R368
 Wilson, D., G132
 Wilson, D. F., H1295
 Wilson, J. S., H937
 Wilson, N., H1199
 Wilson, R. F., H866
 Winder, W. W., R38
 Windhager, E. E., F787
 Wingate, D. L., G319
 Wingrove, T. G., C737
 Winter, M., C781
 Witek-Janusek, L., E525
 Withers, R. T., E374
 Wolf, P. D., H891, H902
 Wolfe, R. R., E548, E871
 Wolff, S. D., F581
 Wollheim, C. B., G33
 Wollmuth, L. P., R600
 Wollnik, F., R1055
 Wolosin, J. M., C595
 Wolpert, E. B., E65
 Womack, W. A., G162
 Wong, E. F. C., C260
 Wong, K. R., F1220
 Wong, N. L. M., E260
 Wong, S. M. E., F1015
 Wood, C. E., R412
 Wood, J. G., G813
 Wood, R. J., G339
 Wood, J. D., G184
 Woods, L. L., R894, F823
 Woods, R. L., E934
 Woods, S. C., R200
 Worcester, E. M., F1197
 Worthing, J., G800
 Wright, T. L., G547
 Wu, J., E388
 Wu, K. I., F15
 Wurster, R. D., H789, R703
 Xie, M.-H., F1220
 Yacoub, C., R539
 Yagil, Y., F244, F257, F1230
 Yakubu, F., R616
 Yamada, T., G99
 Yamaguchi, K., R591
 Yamamoto, A., E437
 Yamamoto, H., E928
 Yamamoto, K., E642
 Yamane, Y., H405
 Yamashita, H., R961
 Yamashita, N., C442, E137
 Yanagisawa, M., H970
 Yanase, M., E920
 Yang, H. T., R38
 Yang, J. M., F787
 Yang, Y., R395
 Yankaskas, J. R., C237
 Yarbrough, J. D., G132
 Yasumura, Y., H807
 Yatani, A., H722
 Yatomi, A., E920
 Ymer, S. I., E293
 Yonei, Y., G731
 Yoneyama, Y., C816
 York, D. A., E255, R974
 Yoshimi, H., H405
 Yoshinaga, K., E449, R731

AUTHOR INDEX TO VOLUME 255

Yoshioka, K., H288
 Yoshioka, M., G212
 Yoshiyama, N., F49
 Yotts, M., E886
 Youn, J. H., E680
 Young, A. J., R456
 Young, D. B., H592, F811
 Young, J. B., E180

Young, M. A., H1452
 Young, V. R., E322, E760
 Yox, D. P., R569
 Yrle, L. F., G542
 Yu, Y. M., E760
 Yunker, R. L., H160
 Zadunaisky, J. A., G247

Zager, R. A., F450
 Zamir, N., E383
 Zeidel, M. L., F324
 Zelis, R., H937
 Zhong, S., E760
 Zhu, J. L., R1064
 Zikos, D., C822
 Zimmerman, B. G., R563, F944

Zimmerman, B. J., H202
 Zimmerman, D., R61
 Zimmerman, R. S., R61
 Zipes, D. P., H26, H534
 Ziyadeh, F. N., C385
 Zola, B. E., E636
 Zschauer, A., C433
 Zucker, I., R831

